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THE A. I. ROOT COMPANY, Publishers, Medina, Ohio

Editorial Staff

E. R. ROOT	A. I. ROOT	H. H. ROOT	J. T. CALVERT
Editor	Editor Home Dept.	Managing Editor	Business Manager

"When we receive your Honey  
Return mail brings your Money."

The Fred W. Muth Co.

## Get Service Like this Man

Lake City, Mich., May 5, 1917.

Friend Muth:—Your letter with check for \$146.20 for wax has been received. Thanks. I do believe you beat them all when it comes to quick returns for goods shipped you. I may have some more wax to sell after we get our cappings melted.

Yours truly,

(Signed) Elmer Hutchinson.

## We Want Immediately Extracted Honey

We buy all grades of Extracted Honey. Large or small lots. Send sample and price. If price is right we will buy. Parties who have Fancy and No. 1 Comb Honey, write us at once. We will buy from 40 to 50 carloads this season.

### Beeswax

Send us your beeswax. We pay highest market prices, and send you our check the same day shipment is received.

### Old Comb

Make some spare money from the wax rendered from your old comb. We will render it, charging only 5 cents per pound for rendering, and pay you best market prices for the wax rendered.

## Shipping-cases for Comb Honey

We are prepared to ship you the same day order is received any number of shipping-cases. Several carloads are here now, ready for buyers. Send your order in now before our supply is exhausted. We sell Lewis Beeware.

### Remember

We remit the same day your shipment arrives. Read the letter above and be convinced that this is the house to send your shipments to. Try us.

The Fred W. Muth Co.

"The House the Bees Built"

204 Walnut St., Cincinnati, Ohio



# In Stock for Immediate Shipment

---

800 cases two 5-gallon cans  
12000 5-lb. and 10-lb. pails  
Shipping-cases for comb honey

---

Write us

M. H. Hunt & Son, Lansing, Michigan

# NOTICE!

## Honey . Wanted . Honey

Do not forget, when your crop of honey is ready for sale, to send us a sample. State your price, also how it is put up. We are in the market for unlimited quantities, and will pay cash on arrival. Let us hear from you before selling your crop.

---

C. H. W. Weber & Co., Cincinnati, O.

2146 Central Avenue

## HONEY MARKETS

The price of honey is what the owner of it can get. We do not know how better to put the situation of the honey market today than by just that statement. The previous uncertainty of price is increased by the unprecedented shortage of sugar that now prevails. This shortage will undoubtedly increase the demand for honey, and that demand even heretofore has been greater than the supply. It seems probable now that the retail price limit will be set by the acuteness of the sugar shortage, for there are present restrictions on the amount of sugar sales to everybody and anybody, but no restrictions on the amount of honey that any one person, firm, or corporation may buy. If the demand for sweets and sweetening materials becomes acute enough, what price may honey not reach? We don't know, nor does anybody else. Of course, there can be a price at which nobody will buy. This situation suggests that holders of comparatively small crops of honey, at least, should try to sell retail—to the consumer direct, for such customers will be easy to find, and the price need not and should not be cut below the prevailing retail prices of the local storekeeper, and that is high.

Take the honey market conditions in a typical section of the white-clover region—central New York. One of the foremost beekeepers there writes us under date of Oct. 21 that there is very little honey on the market or in the hands of producers, and that he knows of only 4000 lbs. of buckwheat extracted honey, and this is held at 12 cts. at shipping-point. No. 1 white comb is \$4 per case, and No. 2 mixed comb is held there at \$3.25 a case at shipping-point.

We print below the prices as quoted us by wholesale dealers in cities. We also print the U. S. Government market report, date of Sept. 29. We have not received a later quotation from Washington, as we generally do—perhaps because of the great press of work in the Government printing-office, due to the sale of the second Liberty Loan.

At such a juncture in the honey market as this, we sincerely hope for the day when honey will be considered a food staple, and quoted in the general food markets daily—just as butter and eggs and sugar are quoted. With the aid of clear-headed honey-producers and business-like honey-producers' associations, together with big honey-packers, this day is drawing nearer—a day that will benefit every beekeeper.

### General Quotations of Wholesalers.

CHICAGO.—The market has been active, receipts being taken upon arrival, so that there has been no accumulation of either the high or low grades. Fancy and A1 grades of comb honey are selling at 22 to 23 cts. per lb.; No. 1 at 20 to 21. No ambers have been offered, but would bring within 1 to 3 cts. per lb. of the white grades. Extracted clover is selling freely at 15, with clover and basswood bringing the same price, whether individual or blended. Different amber grades are from 1 to 5 cts. per lb. less according to color, flavor, and body. Barrels bring within 1c per lb. of that in the five-gallon

cans. Beeswax is without material change, bringing from 35 to 37c per lb., according to color and cleanliness.

R. A. Burnett & Co.

Chicago, Oct. 17.

ST. LOUIS.—Comb honey is only in moderate demand, as trade here regards prices as extremely high. Stocks here are also very light, as local comb honey has not yet appeared on this market. Extracted honey is in fair demand, and supply quite ample. The following quotations are what we are getting from the retail trade, and not what we are offering producers: Comb honey, extra fancy, per case, \$4.75; fancy, \$4.50; No. 1, \$4.00; No. 2, \$3.50. Extracted honey, white, per lb., brings 15 cts.; light amber, in cans, 12; amber, in cans, 12, in barrels 11. Clean average yellow beeswax brings 37 cts.

R. Hartman Produce Co.

St. Louis, Mo., Oct. 18.

PORTLAND.—Comb honey is coming in very slowly and is in good demand. For some reason the producer is not marketing comb honey as early as in former years. Freight rates in many instances make it prohibitive being double first-class in L. C. L. Extracted is coming in more freely; but prices being very high naturally restrict consumption. Quality of both comb and extracted is very good. We quote comb honey, fancy, \$4.00; No. 1, \$3.75; No. 2, \$3.50. Extracted honey, white, per lb. brings 15; light amber, in cans, 14; amber, in cans, 13. Beeswax, clean average yellow, brings 30 to 32 cts.

Pacific Honey Co.

Portland, Ore., Oct. 12.

SAN FRANCISCO.—Extracted honey of all description is moving out splendidly, altho the local demand is slow. Only liquid honey attracts jobbers, but for export it makes no difference if granulated or not. Hawaiian honey is in more free supply, but on account of the general run always being packed in second-hand containers, and so presenting a rather uninviting appearance, it does not receive the attention that other grades of honey do. We quote the following prices to jobbers: Comb honey, fancy, per case, \$3.50 to \$3.60; No. 1, \$3.00 to 3.25; No. 2, \$2.50 to \$2.75. Extracted honey, white, per lb., 13½ to 14; light amber, in cans, 12 to 13; amber, in cans, 10 to 11. Hawaiian 9 and 10c in 5-gal. tins. Beeswax, clean average yellow, per lb., 33 to 36c.

Leutzing & Lane.

San Francisco, Cal., Oct. 17.

LOS ANGELES.—Very little honey in stock here. There is a heavy demand for amber and light amber—not so heavy for white. Comb honey is just coming into this market. High prices lessen demand. We quote comb honey, fancy, per case, \$4.50; No. 1, \$4.25; No. 2, \$4.00. Extracted honey, white, per lb., brings 15 cts.; light amber, in cans, 13; amber, in cans, 12. Beeswax, clean average yellow, brings 40 cts.

Los Angeles, Cal., Oct. 17.

DENVER.—We are at present selling new honey to retailers at the following prices. No. 1 white comb honey, per case of 24 sections, \$4.50; No. 2 at \$4.00. Extracted white, according to quantity, 15 to 16; light amber, 14 to 15. We are buying beeswax at all times, and are at present paying 38 cts. in cash and 40 in trade for clean yellow wax delivered here.

The Colorado Honey Producers' Association.  
Denver, Colo., Oct. 17.

KANSAS CITY.—Demand is moderate. Receipts are slightly heavier, and prices a little lower. We quote comb honey, No. 1, per case, \$4.25; No. 2, \$4.10. Extracted honey, white, per lb., brings 15 cts.; light amber, in cans, 14; amber, in cans, 12 to 13. Beeswax, clean average yellow, brings 40 cts.

C. C. Clemons Produce Co.

Kansas City, Mo., Oct. 17.

SYRACUSE.—The situation of the market is about the same as it was at last month's quotation. We think honey is being consumed more as the season advances. We quote comb honey, extra fancy, per case, \$4.80; fancy, \$4.32; No. 1, \$4.00; No. 2, \$3.60. Extracted honey, white, per lb., brings 15 cts.; light amber, in cans, 13; amber, in cans, 11.

E. B. Ross.

Syracuse, N. Y., Oct. 16.



**BUFFALO.**—Supplies are very light. Not much is offered. Prices are fairly firm at following quotations: Comb honey, fancy clover, per lb., 22 cts.; extracted honey, white, per lb., brings 15.  
Buffalo, N. Y., Oct. 16. Gleason & Lansing.

**PITTSBURG.**—No improvement in demand as yet. We expect that trade will open up within the next few weeks. We quote comb honey, extra fancy, per case, \$4.00; fancy, \$3.75; No. 1, \$3.50.  
Pittsburg, Pa., Oct. 19. W. E. Osborn Co.

**CLEVELAND.**—Demand is improving, not very active. Supply is only moderate. Comb honey does not appear to be as uniform in appearance as at other seasons. We quote: comb honey, extra fancy, per case, \$5.25; fancy, \$4.75 to \$5.00; No. 1, \$4.50.  
Cleveland, O., Oct. 18. C. Chandler's Sons.

**BOSTON.**—Demand good; supply difficult to get. The quality of extracted is as good as we have ever had. Comb is fancy. We quote comb honey, extra fancy, per case, \$4.50; No. 1, \$4.00. Extracted honey, white, per lb., 18 cts. in cans; light amber, in cans, 16.  
Boston, Mass., Oct. 18. Blake-Lee Co.

**TORONTO.**—The crop of honey was nearly 50 per cent below the normal, and prices ruling now are the highest known for years. Stocks in the hands of the producers are practically exhausted. Pure white-clover honey in five and ten pound tins is selling to the retail trade at 19 cts. per pound. Honey in glass is almost off the market.  
Toronto, Oct. 17. Eby-Blain Limited.

**MONTREAL.**—There is a good demand for all lines of honey. Stock on spot is small; big consumption among the country trade. This holds honey back from the city. We quote comb honey, extra fancy, 21 cts.; fancy, 20; No. 1, 18; No. 2, 16. Extracted honey, white, per lb., brings 16 cts.; light amber, in cans, 15, and in barrels 14; amber, in cans, 14, and in barrels 13½.  
Montreal, Oct. 16. Gunn, Langlois & Co., Ltd.

**HAMILTON.**—Honey is selling well. Only small shipments are coming forward. Sample is good. We quote comb honey, extra fancy per case of 15 sections, \$4.00; fancy, and No. 1 and No. 2, none in market. Extracted honey, white, per lb., brings in 60-lb. tins, 17 cts.; in light amber 10-lb. tins, 18; and amber, none in market. No beeswax is offered.  
Hamilton, Ont., Oct. 16. F. W. Fearman Co.

**MATANZAS.**—Extracted honey, light amber, in barrels, \$1.30 cts. per gallon; amber, in barrels, \$1.30. Beeswax, clean average yellow, brings per lb. 38 cts.  
Matanzas, Cuba, Oct. 13. A. Marzol.

**LIVERPOOL.**—The beeswax market is steady. Of Chilean, 30 bags have been sold at \$52.10 to \$53.35 from store. Honey is in good demand at steady prices. Sales of 800 barrels have been made. We quote Chilean at \$22.20 to \$22.80 per 100 lbs., pile X; \$21.60 to \$21.84 for pile 1; \$19.68 to \$19.92 for pile 2; \$19.20 to \$19.44 for pile 3; \$15.60 to \$16.80, no pile. Of Haiti, 195 barrels were sold at \$20.40 to \$24.84; of Argentine 50 barrels at \$16.12 to \$19.20; of Californian, 500 cases at \$25.20; of Jamaica, 305 barrels at \$20.04 to \$22.80.  
Liverpool, Oct. 4. Taylor & Co.

### U. S. Government Market Report.

This is the eighth of a series of similar reports, dated Sept. 29, issued by this Bureau of Markets on the first and fifteenth of each month during the honey-shipping season. The information is secured by representatives of the Bureau located in the markets, and is transmitted to Washington by wire. For the present the bulletins will be issued only from Washington. These bulletins will be sent by mail free to any person requesting them. All inquiries should be addressed to Charles J. Brand, Chief.

Less-than-car-lot prices on large lots to jobbers:

**Cincinnati.**—Arrivals, 1 car Wisconsin comb; 5 barrels and 6 cases Iowa; 28 cases Michigan; 10 cases Alabama; 1 barrel and 9 crates Kentucky; nearby receipts are light; demand good, market very strong, movement moderate on account of high prices. Extracted honey, light amber, 15 cts.; orange and white sage, 17. Comb honey, fancy white, heavy, \$4.75; No. 1, white heavy, \$4.50 per 24-section case.

**St. Louis.**—Extracted honey, Southern light amber, in barrels, 11½ to 12 cts. per pound; in cans, 12 to 12½. Beeswax, light supplies, 36 to 37 cts. per pound. Honey arrivals—1 car Porto Rico and moderate L. C. L. Southern.

**Minneapolis.**—Light local receipts; no rail arrivals; demand and movement slow, market steady. Colorado—white comb honey, 24-section cases, \$4.00 to \$4.25; extracted honey, white, in 60-lb. cans, mostly 14 cts. per pound. Minnesota, comb honey, 24-section cases, fancy, mostly 18 cts., choice, mostly 16 to 17 cts. per section. Extracted honey, white, in 5 and 10 lb. pails, mostly 15 to 16 cts. per pound. Beeswax, no sales reported.

**St. Paul.**—Arrivals, approximately 700 cases Minnesota comb, 10 cans extracted and 2 barrels; approximately 1020 lbs. mixed comb and extracted from Wisconsin, 1 car from Ohio, mostly extracted and light local comb receipts. Demand is moderate, market firm. Minnesota and Wisconsin—white comb, 24-section cases, 18 to 19 cts. per section; extra fancy, small lots, 20 cts. per section; no sales of extracted honey reported. Beeswax, no sales reported.

**Chicago.**—No carlot arrivals; receipts from nearby states very light. Demand is active, market strong. Comb honey, white clover, fancy, mostly 22 cts. per pound; No. 1, 20 to 21. Extracted honey, fancy white clover and basswood, mostly 15; other stock, 13½ to 14½. Extracted honey, California, practically cleaned up; no sales reported. Beeswax, 35 to 38 cts. per pound according to purity.

**Denver.**—Arrivals, approximately 3500 cases white comb and 60,000 lbs. white to light amber extracted. Demand and movement moderate for comb; demand light, movement draggy for extracted honey; market firm. Quality and condition generally good. White comb honey, firsts, \$4.05 per 24-section case; seconds, \$3.60. Extracted honey, white to light amber, 14½ to 15. Beeswax receipts very light; price to producer, 34 cts. per pound.

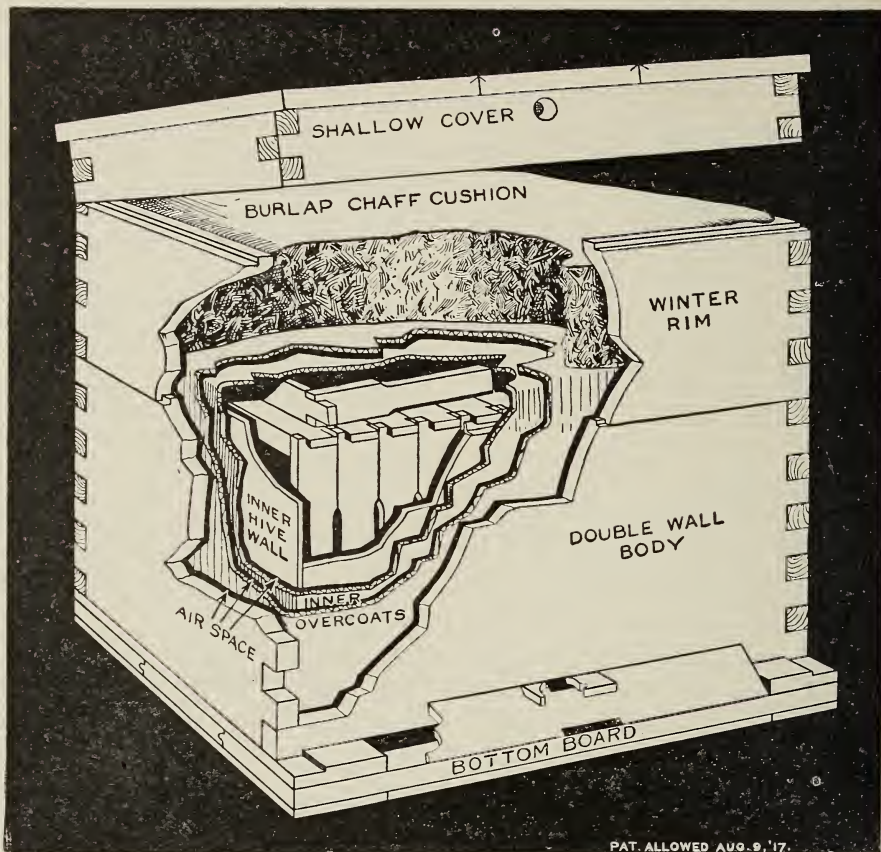
**Philadelphia.**—Arrivals, 300 cases and 35 kegs extracted, approximately 1200 cases comb, all from New York state; approximately 100 cases local comb; no imported stock arrived. Demand moderate, market steady. Few sales Southern extracted; amber, 11 to 11½. New York, quality only fair; very few sales of mixed grades; light amber to white, 19. Beeswax, demand slow, market steady; 37 to 38 cts. per pound.

**New York.**—Arrivals, 1 car California, 5 barrels Florida, 15 barrels Key West, 9 barrels Texas, 39 half-barrels Texas, 408 barrels Porto Rico, 871 barrels Santo Domingo, 216 barrels Cuban, 30 cases British Honduras. Market fair, demand moderate. Extracted honey, West Indian, \$1.25 to \$1.50, mostly \$1.35 to \$1.40 per gallon; California, dark, 12½ to 13 cts. per pound; light, 14 to 14½. Comb honey, per 12 sections, \$3.00; export, demand slow; market quiet; no prices reported. Beeswax arrivals, 328 packages Cuba, 421 packages Santo Domingo. Market quiet, demand slow. Yellow stock, 38½ to 40 cts. per pound; dark stock, 36 to 38.

**Kansas City.**—Comb honey arrivals, 1 car Colorado, approximately 100 cases native by express; extracted, 120 cans Colorado. Demand and movement moderate, market firm. Colorado comb honey, quality and condition good, 24-section cases, few fancy, \$4.50; No. 1, \$4.35; No. 2, \$4.15; extracted honey, white and extra light amber, 14 to 15 cts. per pound; dark and extra dark, 10 to 12; native comb honey, all sales in small lots; quality and condition good; 24-section cases, mostly \$4.50. Beeswax approximately 400 pounds arrived; demand limited, market steady, all sales in small lots; mostly 40 cts. per pound.

Arrivals include receipts during preceeding two weeks. Prices represent current quotations.

# WOODMAN'S New Protection Hive



The Hive with an inner overcoat. . Wintered 100 per cent perfect in 1916-17. . . Winter Problem Solved.

The same dimensions as formerly. The construction now is such that a bottomless corrugated paper box can be telescoped down over the brood nest, in between the outer and inner hive walls, as a matter of insulation or protection when preparing them for winter. The work of preparing the bees for winter with this system is a joy. In Spring the boxes are removed and stored away in the k. d. flat. A new circular with large illustrations will describe all. Send today for one.

## TIN HONEY-PACKAGES

YOU WILL MAKE A MISTAKE if you do not ask for our LOW PRICES on Friction Top Pails and Cans. We are SAVING MONEY for carload buyers and others of smaller lots, why not you? Our three-year contract is enabling us to make prices a considerable under general market quotations. Let us hear from you, specifying your wants.

## FRICTION-TOP TINS

	2 lb. cans	2½ lb. cans	3 lb. cans	5 lb. pails	10 lb. pails
Cases holding .....	24	24	..	12	6
Crates holding .....	..	..	..	50	50
Crates holding .....	100	..	100	100	100
Crates holding .....	603	450	..	203	113

A. G. Woodman Co., Grand Rapids, Michigan



# SHIPPING-CASES PROMPT SHIPMENT

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By the time this issue of Gleanings reaches you you will know your requirements for shipping-cases. We have quite a supply of these on hand now and can ship promptly.

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Better order at once as freights are slow, and as they are heavy must go by freight. Express would be too expensive. Next month figure out your wants for next year; then send an order for goods on which we will allow an early-order discount. In ordering shipping-cases please remember they have advanced in price 4c each. . . .

---

F. A. Salisbury, Syracuse, New York  
1631 West Genesee St.



# Are You Throwing Money Away?

No? But are you throwing away old combs, small lots of cappings, or else beeswax scrapings and propolis from the tops of your frames when you clean them? If not, perhaps you are melting up your combs in an old-fashioned way and getting only about half the wax out of them.

Many beekeepers this year secured their season's supply of

## Dadant's Foundation

by sending in their combs and cappings to be rendered into beeswax and made up into foundation. Our high-pressure steam outfits get all the wax possible, save these same beekeepers an unpleasant job and return more beeswax in the shape of foundation than they could get by the extra work themselves. If you prefer we will pay you **HIGHEST CASH PRICE** for all beeswax rendered.

—Send For Our Terms—

## Friction-top Cans and Pails

WE CAN STILL FURNISH FRICTION-TOP CANS AND PAILS AT THE FOLLOWING PRICES F. O. B. CHICAGO, KEOKUK, IOWA, OR HAMILTON, ILLINOIS.

2-lb. cans in crates of 612 per crate.....	\$26.75
2½-lb. cans in crates of 450 per crate.....	22.50
2½-lb. cans in cases of 24 per case.....	1.40
5-lb. pails in crates of 200 per crate.....	16.00
5-lb. pails in crates of 100 per crate.....	8.25
5-lb. pails in cases of 12 per case.....	1.20
10-lb. pails in crates of 100 per case.....	12.50
10-lb. pails in cases of 6 per case.....	.95
SPECIAL PRICES on 5-lb. pails in lots of 400 or more at one time.	

## Beehives and Supplies

Many beekeepers were delayed in getting their bee supplies last season on account of the congestion of freights. Suppose the same thing should occur next spring? Are you forearmed? Why not get your supplies in early and avoid the congestion?

If you expect to buy a lot of goods, send us the list. We know we can interest you with our early-order offer, and we will guarantee that you will be pleased with the goods you receive. Write today.

WE WANT BEESWAX—ASK US FOR OUR BEST PRICES

# Dadant & Sons, Hamilton, Illinois

# GLEANINGS IN BEE CULTURE

NOVEMBER, 1917



## EDITORIAL

AS MENTIONED elsewhere in the Honey Report columns, page 824, the Government

### SHORTAGE OF SUGAR FOR FEEDING

has already commandeered sugar. No one can buy more than two pounds for a family.

Rich and poor are served alike. While this shortage may be only temporary\* many beekeepers who have deferred feeding will be up against it. Some will have to buy honey, and this is always dangerous on account of bee diseases.

The temporary shortage of sugar, and possibly of honey stores, emphasizes the great importance of winter protection. Colonies should not be left outdoors in single-walled hives in northern localities. They should either be put in the cellar or be given good warm housing by either of the methods illustrated and described in this issue.

In a few cases in small towns the beekeepers may be able to buy brown sugar in sufficient quantities to tide them over. It is nearly the equal of the white, and is excellent for dry feeding in trays placed over the cluster of bees.



THIRTY YEARS ago one of the bee-journals was filled with what was called the "pollen theory."



### POLLEN FOR SPRING BREEDING

There were some of the early writers, including the late James Heddon, who believed that pure sugar stores free from pollen was a guarantee to good wintering; and there were many who believed that pollen was the sole cause of dysentery in the spring.

But it was discovered that while sugared colonies would pass thru the winter in fairly good condition they were unable to raise any brood; and brood-rearing in the spring, to a moderate extent for outdoor wintering, is almost a necessity to replace the old bees dying off.

\* It is reported that there will be relief as soon as Cuban and beet sugar gets on the market.

In these later days it seems to be the generally accepted opinion that natural stores containing pollen give better results in wintering and springing than the artificial stores. Honey, besides being a more natural food, contains some valuable elements besides pollen; for, apparently, pollen in the combs is a necessary food element—not for wintering but for springing when bees start brood-rearing.

At one time it was believed that the artificial pollen substitutes such as rye meal would supply the deficiency; but the beekeepers of the United States know that there is nothing equal to natural pollen. A colony cannot build up to good working strength unless it can have natural pollen.



REFERENCES have been made in late issues to this plan of uniting bees. For the



### UNITING BY NEWS-PAPER METHOD

benefit of those who may not have the former numbers of GLEANINGS handy, we may say that the plan contemplates

a method of uniting two under-strength colonies one on top of the other, with a single sheet of newspaper between. In a short time the bees will gnaw a hole thru the paper and gradually unite without going back to the old stand. Of course it is understood that one of the queens should be removed, and it is important that the other be caged.

We find it necessary, however, to go a little further and put on a queen-excluder in addition to the newspaper. A queen for the two colonies is put either above or below, wherever the strongest cluster is.

We have also found it necessary to punch a hole thru the paper with a pencil, because we have learned occasionally that bees in the upper hive, on account of a lack of ventilation, worry and die off in bunches.

We also discovered that the two families will not unite until all the brood is hatched out in the queenless compartment. By con-



fining a queen to the upper or lower hive the bees will gradually work toward the part containing a queen, but not until all the brood is hatched out.

In cooler weather it is not necessary to use a newspaper, but unite direct and cage the queen.

In cold weather, there will seldom be any fighting and not much trouble from the bees returning. The newspaper scheme, however, is much preferable, but should be applied in September or August. If the weather is at all warm it is absolutely necessary to punch a hole thru the paper with a pencil or else some bees may smother.



SOME TEN YEARS ago we were able to deliver a much larger percentage of live queens to foreign countries than we have been able to do in the last few years. It was expected, of



**QUEENS  
FOR  
EXPORT**

course, that when the great war was in progress there would be considerable difficulty in getting queens thru alive, and that is precisely what did happen; but even before the war began, queens were not going thru to foreign countries as they had formerly done. Part of this may have been due to the fact that the Postoffice Department requires the boiling of the honey that goes into the queen-cage candy. Boiled honey is not as good as unboiled; however, we have had practically as good results with invert sugar syrup as with raw honey for domestic trade. But our deliveries have not been as good for the export business.

Mr. Isaac Hopkins, of the *New Zealand Bee Journal*, attributes the difficulty to modern methods of grafting in queen-rearing. But this cannot be the source of the trouble, for precisely the same methods in rearing queens were used ten years ago.

Mr. A. Baratt, a correspondent of the journal mentioned above, suggests that the greater mortality is due to the queens being bumped in the mail-sacks more severely on account of the quicker service. He also suggests that the mail-bags are now being fumigated as they were not in earlier days. It is our opinion that Mr. Baratt, aside from the influences of the great war, has suggested the two main causes for the greater mortality of queens for export.

In reference to fumigation the question might arise as to why some queens go thru alive in a package while others are dead. It is possible that some queens can stand more than others; but it is rather significant that when a package of queens goes

thru they are either all dead or nearly all alive, with their attendants. This would lead to the supposition that the last mentioned were not fumigated, while the others were.

We are writing to the Postoffice Department to inquire whether all mail matter for export is generally fumigated; and if so, to what countries.



THE READER'S attention is directed to the Demuth method of wintering referred

to on page 842. We



**DEMUTH'S  
METHOD  
OF WIN-  
TERING**

may add that the plan has been tested out in a limited way, and found to be good; but, as

stated in the article, we would not advise any one to go further than to try out a few as compared with other methods of wintering.

The suggestion has been made that, instead of having the entrance of the inner case so it will open up to the ends of the frames, the entrance slot should be placed on the side in order to avoid a draft thru the frames. We believe it is a good idea, altho it would not permit of giving a large amount of packing space all around the packing-case as in the other way.

It cannot be made too emphatic that in reducing from ten to six frames that the combs on which the bees are to be wintered should have sealed honey as well as some pollen. Sealed sugar stores and a comb of pollen may answer.



OUR READERS will remember we have always advised against doing this, as we

do not believe it is



**SENDING  
COMB  
HONEY  
BY MAIL**

practicable. A sample section of comb honey came to us this morning, Oct.

15, which the sender

desired us to pass on, as he wished to know the quality and source. Apparently the outside of the package was all right; but on opening it up there was a mess. The section had been very carefully wrapped in paraffine paper, and this paper was all that prevented the honey from leaking into the mail-bag. Around the paraffine paper was a carton; around the carton several folds of stout corrugated paper; and outside of the whole there was wrapping paper folded and tied. In spite of all this protec-

tion it is a wonder that the entire contents of the mail-bag which held it were not smeared with honey.

A single section of honey can be put into a small market basket and packed in excelsior. The package ought to be such that it may be thrown clear across the street without damage to the comb; but a section of honey would be broken sometimes. It is not advisable to ship comb honey in the section by mail unless the comb is thoroly attached to all four sides, and the cells next to the wood containing honey are sealed. The average comb should be cut out of the section, wrapped in several folds of paraffine paper, then in several folds of other paper, and the whole inserted in a ball of excelsior, and the excelsior put into a small market basket with a handle.

The reason why we recommend cutting the comb out of the section is to get it away from its slender attachments. A very slight jar will break the comb loose from the section; and when the package is bumped around in the mails there is so much room in the section box that the comb will be battered to pieces. On the other hand, if the comb is cut out and washed to remove the drip and then carefully wrapped as explained, there is no chance for the comb to rattle around in a loose space as there would be if broken from a section box.

When one goes to this trouble he had better send the honey by express. It would cost but a trifle more.

Some day some one may devise a scheme for sending comb honey by mail. At present there is nothing to prevent its going into a mail-sack where it will be smashed as sure as fate. If there is anything that can make a general mess among a lot of paper it is a section of comb honey broken to bits; and if there is anything that would make a postal clerk madder we don't know what it is.



THE DEMUTH method of wintering, referred to on page 842 of this issue, calls



for a reduction in the size of the winter nest from a ten-frame colony down to a six-frame or less. It has been

the practice among the best beekeepers who winter outdoors to contract the summer capacity of the hive down to not more than eight frames, and very often down to seven. The question whether a good colony can be squeezed down to six frames may be debatable. In our own locality it has been our practice to reduce a ten-frame down

to an eight-frame or less. These seven frames filled with stores will give all the room a good colony needs for winter, as a rule. The extra space in the hive can be better taken up by means of dummies or two-inch chaff division-boards. If two of these are used on the outside in an ordinary double-walled hive, the cluster within on the six combs will be much more able to keep warm. The packing on the sides will be increased by two inches, giving the colony a much better chance to winter, and at the same time conserve stores. We are satisfied, in the light of the experiments conducted by the Bureau of Entomology, Washington, D. C., that the ordinary commercial double-walled hive with the average colony should have more packing on the sides than is provided by the hive. This can be done very effectively by putting in division-boards and filling the space back of them with leaves, straw, or other packing. If the combs on which the bees are clustered are well filled with stores almost down to the bottom-bar, the colony ought to winter well on six combs. The average L. frame with old stores will weigh in the neighborhood of 6 lbs. After the winter nest has been formed, there should be left to each six-frame colony 30 lbs. of stores, or 36 if the combs are filled solid.

If colonies are to be wintered in the cellar, the cellar well dried and ventilated, the amount and disposition of the stores in the combs is not so important. In a cellar where the conditions are right, 10 lbs. may be enough for a colony for wintering; but in that case the colony would have to be fed as soon as put out in the spring, and spring feeding is not advocated.

An inside-wintered colony ought not to have less than 15 lbs., and 20 would be better. An outside colony, according to some of our authorities, should have from 30 to 40 lbs. We have found from 25 to 30, provided the colony has a large amount of packing, is quite ample. But we always carry over some extra combs containing sealed stores to give the colonies in the spring if they need it.



IN THE OLDEN days it was regarded as quite important to have a clustering-space



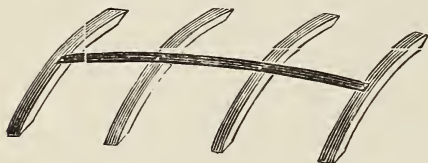
between the top CLUSTER- packing and the ING-SPACE tops of the brood- ABOVE THE frames. The purpose of this was to

allow the bees to move from one comb to another without being compelled to go around the ends of the



frames. This extra space was provided by placing two or three blocks of  $\frac{7}{8}$  square stuff, or corneobs, crosswise of the center of the frames. Over all was placed a burlap sheet.

For a number of years manufacturers sold what was called the Hill device, a little framework something like that shown in the illustration below. This was placed over the tops of the combs, and a burlap sheet over all; but in late years the Hill device has disappeared from the catalogs of the manufacturers.



The question is, "Has the top-clustering-space scheme for outdoor-wintered colonies been abandoned?" Yes and no. In later years it has been the practice to place a thin board (commonly called a super cover) over the tops of the frames. This allows a bee-space over the entire top of the hive, and it has usually been considered sufficient; but the question is, whether it would not be advisable to go back to old principles by allowing an inch or more space between the covering and the top of the frames. In localities where the absorbing principle\* is used, the space of an inch over the tops of the combs is almost a necessity. To accomplish this it has been the practice to place a bridgework under the packing so that the bees can pass from over the tops of the combs as fast as they consume the stores and move over to other stores. In other localities, where the climate is more mild, a thin super cover not sealed down seems to provide ample room.

During the last year or so beehive manufacturers have been putting out for inner covers, under the telescope outer cover, boards bound on four sides with  $\frac{3}{8}$  cleats. A hole in the center for a bee-escape is left open for the passage of the moisture into the packing above. By placing the cleated side of the board down there will be left a space of  $\frac{3}{4}$  inch over the top of the frames for clustering. Those who have the latest-made hives can very easily give this amount of space over the frames, and we certainly would advise it. The old-style super-covers might better be cleated in the same manner; and if a hole is cut in the

center large enough to afford a bee-escape the moisture can pass upward.

In our locality we have made no provision for this escape of moisture, and find that bees winter nicely. But some of our best authorities in the colder climates insist on the importance of having the covering on top of the cluster made so that the moisture can pass upward in the packing above. We are inclined to take a middle ground, and therefore believe that the escape-board when reversed gives all the top clustering-space that is needed, and at the same time affords an opportunity for the moisture to go above.



ELSEWHERE in the Just News department of this issue it will be noted that John C. Bull, secretary CONVENTION of the National Bee-keepers' Association, DATES

has arranged to have the dates of the various state conventions consecutive as nearly as possible. Some effort along this line has been made in the past in this direction; but even then, several important dates conflicted.

It is, perhaps, unnecessary to explain that, by having the dates consecutive, it enables speakers like Dr. E. F. Phillips, or others of national reputation, to go to any one or all of the conventions. It is certainly desirable to have Dr. Phillips, apicultural expert of the national Government, get in close personal touch with all of the state associations; and speakers who have been all over the United States can sometimes give out information that is valuable to local societies. Moreover, they help boost the attendance.

GLEANINGS expects to be represented at most of the conventions—probably in the person of E. R. Root. C. P. Dadant, of the *American Bee Journal*, will attend several. See Just News.



The picture appearing on our cover this issue is the royal palm, with the algarrobos in the background. The photo was presented to us by U. Trista, of Santa Clara, Cuba, as was also the picture of the papaya carrisa, a tree we have previously mentioned as growing in A. I. Root's southern garden.

This papaya, we are told, is a tree growing on Mr. Trista's bee-farm, and, altho but one year old, it has produced forty-one fruits, some as long as seventeen inches. All three of these trees are very good honey-producers.

\* This consists of a porous covering so that the moisture can pass upward into the packing above.



## QUEEN-REARING TROUBLES

*Some of the Reasons why the Queen-breeders all Over the Country were Unable to Fill Orders Promptly*

By the Editors

THE season just past has been the most difficult for the queen-breeder and the most trying to the queen-buyer of any year within the recollection of the present generation of beekeepers. It has been "something just awful," as both queen-breeder and queen-buyer will testify. The cause is not far to seek—unfavorable weather conditions prevailing over the entire country. This bad weather began early in the year and stayed late.

That the queen-buyers may gain some comprehension of the queen-rearer's troubles and worries during the season of 1917, and that the queen-rearer may gain more charitable consideration from the queen-buyer than he has generally had this year, we are printing below the statements of some prominent queen-rearers regarding their trials and tribulations of the last few months. These queen-breeders don't exactly say so, but they undoubtedly endorse the Biblical statement that "charity suffereth long and is kind."

### NO OTHER BUSINESS SO DEPENDENT ON THE WEATHER.

In all of my experience as a queen-breeder I never had such unfavorable weather conditions to encounter as this season. I venture the assertion that if the queen-buyer could place himself in the position of the queen-breeder for one season, and experience the difficulties with which the queen-breeder has to contend, he would sympathize with him. Of all the occupations in the world, none are more dependent upon weather conditions than that of queen-rearing.

Last June I could not supply one-half as many queens as usual, on account of inclement weather. We worked in cold drizzling rains many times to save queen-cells—not for the sake of the almighty dollar, but trying to avoid disappointing our customers; but after doing all in our power, we had to disappoint many. There was so much cool weather in June that queens would not come out to mate promptly. Also the bees balled and killed so many that we made but little progress in queen-rearing, and were obliged to return hundreds of dollars.

The queen-breeder's life is one of constant worry from the beginning of the season to the end. He starts a lot of queen-cells and then he is hoping that he may have favorable weather to form nuclei when the

cells are ripe and must be attended to; but, alas! the weather is cool and rainy, and he must work under great difficulties or lose

his queen-cells. After his nuclei are formed, and each one is supplied with a nice queen-cell, he is hoping again that the weather may be favorable for the young queens to mate when about five days old; but too often the weather is cool and cloudy, the queens cannot come out to meet the drones in the air, and the bees become discouraged and ball the queens, killing perhaps forty per cent of them. Now he has a lot of orders waiting to be filled, and does not know what to tell his customers, as he cannot know just what the weather will be. So you see he is constantly worried after doing all in his power to surmount the difficulties with which he must always contend.

Morgan, Ky.

J. P. MOORE.

### THE BREEDER SHOULD NOT BE EXPECTED TO GO BEYOND HIS GUARANTEE.

It is not necessary to say that we had bad weather, and that orders were not filled on time. No doubt some purchasers lost by not getting bees or queens on time, yet we doubt if the losses of the purchasers equaled the losses of the breeders. While most of our customers were reasonable, and appreciated the fact that we were doing the best we could for them, yet some were unreasonable. But there were so many reasonable customers that we felt we did not need to bother to sell to those whom we felt were unreasonable. One man asked us to guarantee to deliver him so many packages of bees on a certain date in 1918, and wanted to know how much damages we would pay him if we failed to deliver on the date specified! One customer was very much annoyed because we were five days late in making his shipment, then he paid the express and receipted for in good condition a shipment of 25 2-lb. packages of bees that were all dead because of unreasonable delay on the part of the carrier. Customers should never pay the express charges on bees that are dead when the shipment is not worth the charges. When there is any loss at all, notation should be made on the express receipt, and this receipt sent to the breeder with claim for adjustment.

We believe that breeders agree to replace only the actual losses, and that customers should state in pounds and actual number of queens what they honestly believe the

actual loss is, and not write to the breeder that the loss was about so and so, expecting the breeder to replace more than the amount of the loss.

We used large cages; and, with the exception of a few heavy shipments that were improperly handled, we had few losses.

Usually we think customers will be better off to stick to the breeder with whom the order was first placed, and not demand that the order be canceled if bees are not shipped on the specified day. It rains some days in this part of the world, and then it is impossible to do anything.

We do not hold ourselves liable for more than the purchase price of the queens. No customer who sees a colony go to pieces on account of a bad queen, meanwhile making no report to the breeder, should ever complain to the breeder because of the loss of the colony. In case of the few complaints we have of unsatisfactory queens, most of the complainers usually offer some excuse for not returning the unsatisfactory queens when asked to do so. If complaint is made we think the unsatisfactory queen should be returned, and that postage should be sent the breeder for the mailing of queens to be replaced. All dead queens should be returned to the breeder, for frequently he can tell the cause of the trouble, so that it can be avoided in the future. We want to be fair to all of our customers and give them value received for their money, and we think that almost all if not all of the other breeders feel the same way.

With extracted honey where it is now, it looks as tho we had better be producing it rather than selling queens or bees.

Mayhew, Miss.

D. D. STOVER.

#### WHO IS TO BLAME FOR THE ENVIRONMENT AFTER ARRIVAL OF THE QUEENS?

Because of the unusual weather conditions this year, we found that we were not always able to send package and queens by the date agreed upon. This season was also unusual in the number of reports we received of queens failing to lay or laying only drone eggs. We did not receive a great number of such reports; but there were too many, and we feel sure that these reports were true, altho we always let each queen lay twenty-four or more hours before taking her out to send. We breed drones also, so as to have them in great numbers all the season. Of course we always welcome a report that we sent out a queen that proved "no good," but we do not welcome the behavior of such queens. Out of the 5500 queens sent this season, we have had 38 such reports. All of these

queens were replaced at once. Tho we go to some expense in order to counteract the effect of bad weather as far as possible, still we were hindered more or less by weather conditions.

I suspect that very bad weather and nectar conditions are often the cause of the bad results obtained by the buyer. Perhaps he gets a small swarm and queen so early in his locality that he has no nectar. He puts these bees on comb foundation (instead of combs and honey), and by feeding syrup hopes that the bees will make comb, the queen lay, and all work properly, about the same as tho there were a natural flow. I think the above case is *too contrary* to natural conditions for us to expect good results, unless good weather comes soon after he hives the said swarm.

We do know that on a certain day a shipper may send to two people in different parts of the country, perhaps twenty-four queens or swarms and queens. No difference is made by the shipper in quality of the bees nor care of preparation. One customer sends a nice complimentary unsolicited report, and the other sends a bad report. We learn that the first customer had good weather and nectar conditions, while the other had the reverse conditions. Was the shipper responsible for this difference? Well, I guess if the shipper is praised for the first shipment he should be "cussed" for the latter. At any rate the good reports are so many more than the bad ones that we always have smiles, courage, and confidence.

W. D. ACHORD.

Fitzpatrick, Ala.

#### WILL HIGHER PRICES BE NECESSARY?

The past season has been the most discouraging one in my twenty-five years of experience as a commercial queen-breeder. An unusual amount of bad weather in the spring, and dry weather along in the summer, made it extremely difficult to fill large orders on time, and some of the smaller orders could not be filled as promptly as usual. From what we can hear, our experience has been about the same as that of other breeders.

Now, Mr. Editor, how things can be made more amicable or satisfactory to both breeder and customer in a season like this, that problem is too much for us. However, it is our opinion that, if the present prices on honey are maintained, the demand for bees and queens for the season of 1918 will be more than the breeders can handle, even if the season be favorable, and hence we would suggest an advance in the price of stock. We have already had inquiry for about 300



colonies of bees for next season's delivery. What will it be when the season arrives? It is true that higher prices might deter some from placing as large orders as they would otherwise, but it probably would have a tendency to cause the common bees among the farmers to be picked up and Italianized which would be a good thing.

I believe the pound-package business did not meet the expectation of some of the northern customers, especially those who did not succeed in getting their orders filled till late in the season. The reason we speak thus of the pound-package business is that the bulk of our package business was for queenless packages to strengthen those that were bought from the South and had dwindled owing to bad weather. It is our candid opinion that combless bees under two pounds ought not to be expected to build up from bare foundation or even dry combs.

Bellevue, Ohio. H. G. QUIRIN.

#### HALF THE EQUIPMENT, TWICE THE DEMAND.

This was about the worst season that I have ever seen in this part of the country. In the early spring when the poplar and spring flowers were just beginning to bud we had a severe freeze which practically ruined the spring flow, so necessary for brood-rearing. All during March and April we had an unusual amount of rain which left the roads impassable over most of the country, making it impossible for us to reach our outyards and feed the ones that were short of stores. This caused our loss in some yards to amount to as high as 25 per cent. The colonies that survived were left in such a weak condition that it was impossible to make up more than one-fourth of the nuclei that we could have taken out in a normal season.

Then after getting our queen-rearing started, so little nectar came in that it was necessary to feed the nuclei in order to rush up the queens that they might lay on time (which very few did.) It usually took from twelve to fifteen days and often more to get a queen mated and laying, and this delayed deliveries from two to five days.

Then the clover flow came on with only about half the blossoms that there should have been. The bees being in the condition they were, managed to store only enough for winter with no surplus at all.

With twice the demand for queens, half the nuclei, and double the work, it was absolutely necessary that some one wait. However, I have had very few complaints from dissatisfied customers, for I always explained just how it was; and if they were unwilling to wait I returned the money.

Fort Deposit, Ala. L. L. FOREHAND.

#### OCTOBER SECOND, AND STILL BEHIND.

For rearing queens this has been the hardest season ever known in this locality; and from reports of southern breeders the conditions were about the same there. Each season we often have a few weeks at a time when rearing is difficult, but never are such conditions continuous as during this season. Foreseeing the outcome, I put forth extra efforts in starting cells, but soon found that, even after the cells were nicely started, I had to use twice the colonies to finish them, as here we have nothing but a slow flow till July. Even when feeding the cell-builders, they seemed to note the outward surroundings, and, altho crowded in two stories, they would tear down some of the cells after they were capped. It is under such conditions that the breeders have had to labor this season.

Then, to make it much harder on us, we find that in no other season have we had such prosperous and liberal sales on bees and queens. In spite of all the extra labor, I sent out more bees and queens than during any previous season during the last twelve years; yet it has been trying to the customers, for since May, I was from a week to ten days behind on all orders. I always tried to respond promptly, stating my situation, and leaving it to the buyers to wait or try elsewhere. Some of these orders were passed around to other breeders who were also unable to fill them. This is October 2; and at this date I have not yet caught up on my orders.

Glenwood, Mich.

E. E. MOTT.

#### LONGING FOR SUNSHINY DAYS.

There is no individual more to be pitied than the queen-breeder, especially since his business depends so largely on weather conditions over which he has no control. We never saw such a peculiar season as the one just past. There were scarcely enough bright sunny days to earn the name of summer. The honey-flow came to a close about July 20, and that ended the season. It was very difficult to rear queens while robbers were prowling around from morning till night.

Getting queens mated was also uphill business, for virgins were often lost. Where nuclei were strong and well supplied with stores we were more successful. The small baby nuclei were very unsatisfactory.

Queen-rearing, in order to be a pleasure, requires warm sunny days with some nectar coming in all the time. The average customer, not receiving his queens on schedule time, is ready to complain at once, not knowing that the poor queen-breeder is lying awake nights worrying about the

weather, and longing for sunshine, so that his young virgins can mate. However, we were able to mail queens quite promptly with the exception of some large orders which were somewhat delayed. This last season was the most peculiar of any in all our experience, covering nearly 35 years.

Delphos, Ohio. FRED LEININGER.

#### TWO WEEKS OF COLD WEATHER AND ALL IS LOST.

The past season has been bad for queen-rearing, and lots of orders for queens were delayed. In fact, it has been impossible for many queen-breeders to raise queens at all. Under such conditions it seems to me disappointed buyers should not complain.

Consider the case of the breeder who sells queens by the hundred and has his cells all ready to come out, when about two weeks of bad weather occurs and all is lost. Of course he has promised to fill orders at a definite time, and therefore the buyers become dissatisfied and say a good deal concerning the matter. Now I think the queen-buyer ought to have some knowledge of how long it takes to rear queens. It requires about twenty-five days from the graft, and sometimes thirty days. Another season I believe the beekeepers will have more patience in waiting their turn if they only realize how hard it is to rear queens under bad weather conditions; and remember that there is no breeder who does not want to send queens by return mail.

Barnetts, Va. J. B. BROCKWELL.

#### SOUTHERN BREEDER ESPECIALLY HARD HIT.

The southern queen-breeder has been hard hit this year. Our bees went into winter last fall in tiptop shape, with abundance of good stores, so we were hoping for a good season. Well, time for spring came, and still it was cold and rainy, and continued so. In fact, it was so cold that we had no clover

bloom at all. During the summer, about all the honey-flow we had was from basswood, which did fairly well. In August we were feeding every colony that had had its surplus removed in July. It is hardly necessary to say that, under such conditions, queen-rearing is very difficult. However, we have managed to keep ahead and fill all orders promptly. We have not cut any prices, nor offered any cheap queens, but still we have had a splendid queen trade—almost double that of last year, and have had no complaints so far.

Dowelltown, Tenn. J. IVAN BANKS.

#### CELLS GALORE DESTROYED.

The past season has been a bad one, for which the cold spring offers the only explanation. We would graft a lot of cells hoping for good results, only to find at the time of transferring the queens that the bees had destroyed most of the cells. This was very discouraging when our customers were continually writing that they must have their queens by return mail. We hope next season's queen-raising will be a more pleasant and profitable business, and that our customers will be more willing to wait when occasion demands.

Barnetts, Va. WM. S. BARNETT.

#### STEADY RAIN FOR TWO WEEKS.

This past season in North Carolina was the most backward one that we have had in many years. The spring was late, and, on account of excessive rain and cold, the bees were very slow in building up, thus making early queen-cells quite impossible. After settled weather did come, we had a very serious rain lasting for two weeks, a steady downpour, with scarcely a let-up. During this time it was almost impossible for virgins to mate.

Liberty, N. C. H. B. MURRAY.



FOR the past six years I have kept bees in Indiana in summer and in Florida in winter, and have noted a number of factors in beekeeping which differ greatly in these different latitudes.

## FLORIDA VS. INDIANA

*Keeping Bees in the North in the Summer Time and in Florida During the Rest of the Year*

By J. H. COLLINS

#### TEMPERATURE.

Altho there is a period of hibernation or rest in both states, yet in the South it is

less remarkable and of shorter duration. While bees in the North are tucked away for winter, in the South there are but few days

when they cannot fly out in play and even gather a little pollen and honey, for here there is scattering bloom of peach-trees and a few other flowers all winter. In the North we usually have warm days followed



by warm nights. But in our southern home, where the climate is largely influenced by the ocean, we usually have warm days and cool nights. Therefore the bees are not only careful to guard and warm their brood but are often reluctant, in early spring, to enter the supers. For this reason I am inclined to favor an eight-frame hive for the South, while a ten-frame possibly is better in the North. In either case the bees can be induced to work in supers more readily by placing some of the brood above.

Bees are less trouble in the South because the work of providing winter protection is eliminated. On account of the length of the season, no doubt a person remaining all summer in Florida could have a greater increase of bees than in the North.



J. H. Collins keeps bees both in Indiana and in Florida.

#### FORAGE.

In the North we depend mostly for our surplus upon white clover, with here and there a sprinkling of basswood, and in some localities this is supplemented by fall flowers or perhaps sweet clover. But the beekeeper in Florida looks to the orange for his first and main crop, and later to the palmetto (I speak particularly of my own

locality). Altho the jessamine, maple, and citrous blossoms, etc., furnish fine honey, I regard the orange-blossom honey as most important of all, on account of its beautiful color and finest flavor.

After harvesting the orange honey it is time to hasten to my bees in the North. In order to secure the crop from the palmetto, etc., during my absence, I leave my southern hives with plenty of super room and some bait combs above the queen - excluding honey-boards.

About the 10th of May I am among my bees in Indiana in time to control their swarming and provide supers for their surplus. Returning to Florida in November I usually find the supers filled with golden honey. Of course I reckon on losing a few swarms; but the profit so far overbalances the loss that I am satisfied.

#### BEE ENEMIES.

The enemies of bees are, to my mind, a great deal more troublesome in the South than in the North. Perhaps this is not true in regard to diseases such as foul brood, etc., but the external enemies are fiercer and more numerous.

Birds here destroy more bees than in the North. I have noticed that my hives of blacks outstrip the Italians in early increase and honey-gathering, and I am of the opinion that our Italians, colored as they are, prove a shining mark and are destroyed in greater numbers than blacks.

Dragon-flies are formidable enemies that I have never had to encounter in the North. They are swift of flight, can easily take a bee on the wing, and are especially destructive to queens on their wedding-flight. To destroy the dragon-flies, I advocate putting up boxes for the martin birds (not the bee martin or kingbird, but the house martin, *Horundo purpuræ*). The male is a beautiful glossy black, and has soft pleasing notes. These birds spend most of the day on rapid wing scouring the atmosphere in quest of food, and I have been informed by a close observer that their nests often contain fragments of dragon-flies.

Ants here are more numerous and warlike than in the North. But I easily circumvent them by putting my colonies on benches supported by rods passing thru cups filled with tar.

Roaches are hard citizens to deal with; but cold mornings they are so benumbed that they can be destroyed easily.

Tho we have not grown rich in the pursuit of apiculture, still it has always given us good returns in money, health, and happiness.

Cassadaga, Fla.



WE have been greatly pleased by the many visits of friends and relatives since we pitched our tent in Florida. However, it has become almost impossible to answer all the private letters concerning this country, its climate, possibilities for beekeeping, etc., so I have decided to send these few lines to GLEANINGS, where a good many of our Canadian beekeeping friends will see them.

We spent two very enjoyable winters here, and nearly every one told us that the summers were just as pleasant as the winters, if not more so. This we have since verified, for we find that the rainy season, which commences anywhere from the first till the middle of June, moderates the climate throughout the entire summer. We have had ideal weather since June 12. On July 11 the mercury was standing at 75, for we had a nice shower in the morning, which kept it cool the rest of the day.

The rainy season here differs from that of most countries where it drizzles for days and weeks at a time. Most of our rain comes in short spurts of showers lasting from ten minutes to half an hour, and perhaps the rest of the day will be nice and fine. It may rain nearly every day in June and July, possibly in August or even later. Even during the rest of the year we are liable to have rain any time. Strange

## FLORIDA THE PLACE TO LIVE

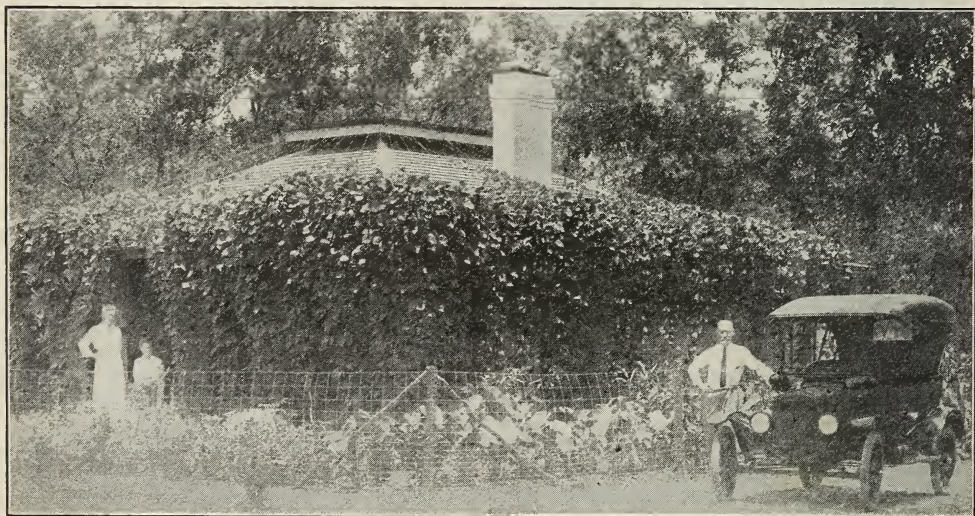
### *Questions Answered Regarding the Climate and the Possibilities for Beekeeping and Gardening*

By Jacob Alpaugh

as it may seem, in this southern extreme the highest the mercury reached, in the summer of 1916, at Lakeland was 94.

As regards the bee business in Florida, I am not very well posted. Here at Lakeland the local beekeepers tell me that some seasons the bees do well, and other seasons quite poorly. We have twelve colonies. Last July we had a fine orange-honey flow, the trees being full of bloom, caused by last winter's freeze and dry weather following up to June 12, since which date the rain caused the trees to bloom more than usual for June. The orange here is supposed to bloom in March; but nearly every year there is more or less of a June bloom. It is needless to say I am keeping bees here only for pleasure, and this is the place to keep them *for that purpose*, as one can handle them every day in the year if he wishes.

I also take great pleasure in having a nice garden, and shall have to admit that I have had four times the satisfaction raising garden truck here that I ever had in the North. It is only a couple of years since we built here, therefore I did not have any garden until last September, 1916. I planted our first corn last February and we had all the green corn we could use in May and June, and after that we had corn in all stages, planting every two or three weeks. It looks as if we should have green



Jacob Alpaugh's new home in Lakeland, Florida, where he plays with his bees and his auto.

corn the rest of our days if we continue to live here.

Our bungalow we built as a winter home, not thinking that we could live here in the summer; but it will soon be two years since we came, and so far we are both enjoying good health—one of the greatest charms a nice climate and good country can offer. There is no mistake about the sun getting hot here, but in the shade it is always pleasant. The illustration shows our bungalow partly shaded with vines which resist the rays of the sun and make the veranda pleasant, even in the middle of the day.

We never owned an auto until we came here; and we now have one for the same purpose that I am keeping bees, and this is surely the place to sport with an auto, as one can use it every day in the year with comfort, since the roads are dry in only a few hours after the heaviest rains. Scarcely does a day pass that we do not go down town with the auto.

We are one mile from the main street,

but still inside of the corporation. Lakeland has a population of about 8000; has three nice lakes inside the corporation, four others partly in or adjoining, also good boating and fishing in all of them. This is supposed to be the best inland town in Florida on account of its elevation, which is 265 feet above the sea, which is only 30 miles west of us at Tampa. The water is also supposed to be as good as any in Florida, if not the best; and on account of our elevation we are above malaria level, and fevers are almost unknown. The cost of living here is about the same as in the North, unless one happens to be a vegetarian with a good garden; then he may be almost independent of the rest of the country outside of his own lot. While we are not vegetarians, yet our garden supplies most of our living.

If any one wants more information from me concerning Florida, let him ask thru GLEANINGS so that I can answer all at once. Lakeland, Fla.



THE island of Oahu is third in size of the Hawaiian Islands. The island of Hawaii is the largest, Maui next, and Oahu third. The city of Honolulu is just inside the tropics. The temperature of the islands is very even, the temperature seldom going below sixty degrees Fahrenheit, or above ninety. The area of the island is 598 square miles. If it were perfectly square the island would be less than twenty-five miles across.

A large portion of the island is mountainous, there being two mountain ranges—the Waianae Range, peaks of which reach an altitude of over 4000 feet; and the Koolau Range, the highest point of which exceeds 3000 feet. The mountains are of volcanic origin, being for the most part but great heaps of blue lava. There are also volcanic craters or cones that are separate from the mountain ranges. These are tufa cones, being composed of tufa and volcanic cinders. The largest and most important of these cones are: Diamond Head, Koko Head, Punchbowl, and Twin Craters, or Salt Lake Crater. The vegetation on the mountains is scrubby and there is practically no nectar-secreting flora, so the mountains are of no value for bees. By reason

## MANAGEMENT OF 300 YARDS

*Extensive Beekeeping as Practiced by  
the Sandwich Island Honey Compa-  
ny on the Island of Oahu*

By Leslie Burr

of this the territory available to the beekeeper is considerably reduced.

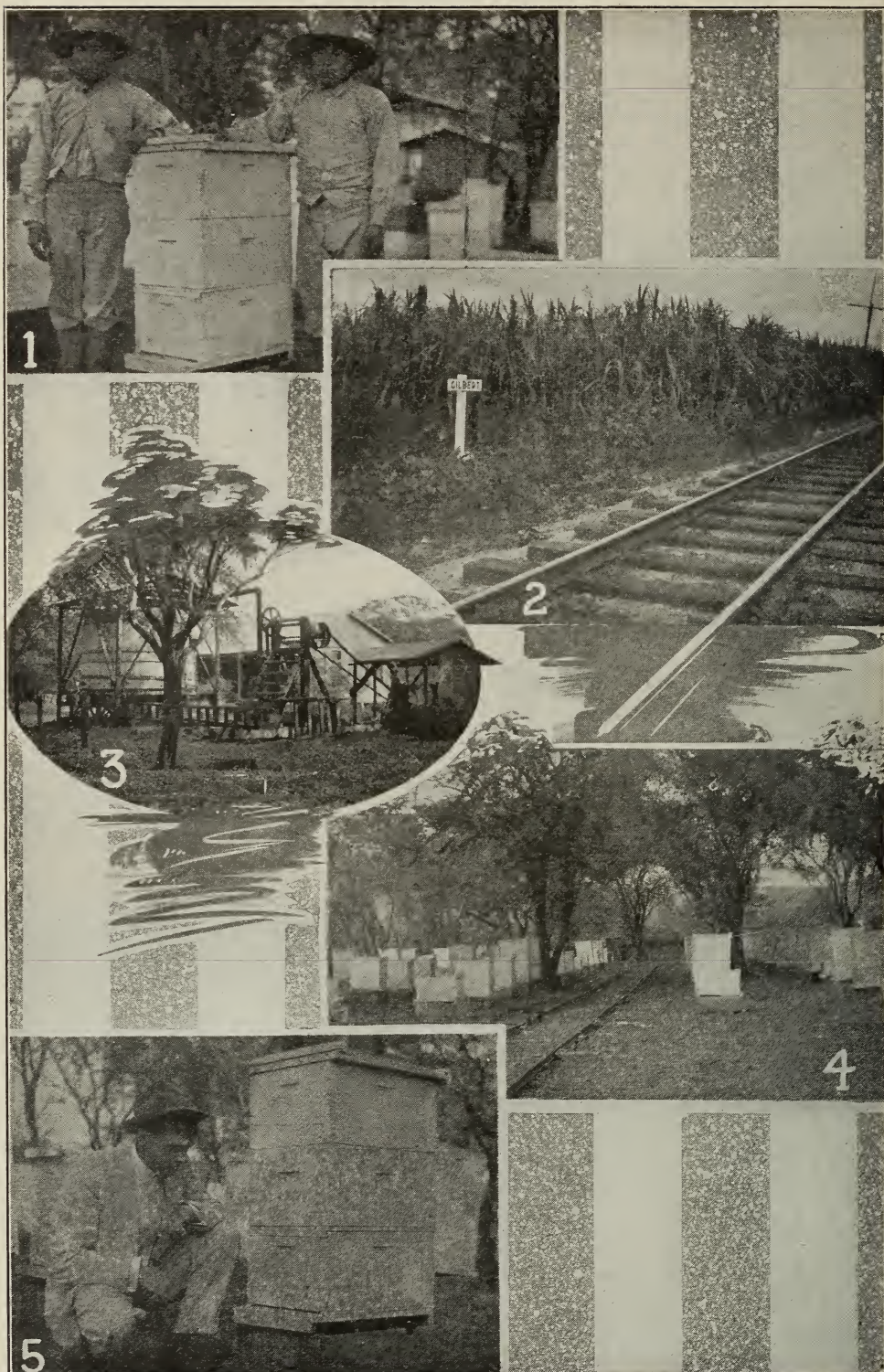
The Gilbert Brothers, when they entered the ranks of the

honey-producers, were animated by the island spirit to do things on a big scale; and in this they are succeeding. They first made themselves absolute masters of the situation by obtaining control of all the island with the exception of Honolulu. They never have to worry about rival beekeepers on their range, for the good and sufficient reason that a rival beekeeper could not obtain a location on which to place an apiary.

For moving bees Gilbert has a team of mules. The particular mules he uses are called the "honey mules" for the reason that they have become accustomed to stings. All they ever do when stung is to rub out the stings from off their noses and from around their eyes. This they do by rubbing their heads against their legs.

The bees are all Italians, and they very seldom swarm. Gilbert has a number of reasons for his bees not swarming. The first reason is that he has always made it a practice to rear all of his queens from colonies that did not swarm. Another reason





Some scenes in O. S. Gilbert's Hawaiian apiaries. 1. Two trusty Japanese beekeepers; 2. Station on the Oahu railroad; 3. Gilbert's pumping-plant that furnishes water for the apiary and for irrigation; 4. one of the central apiaries; 5. Leslie Burr.



is the way the bees are worked just before they begin to breed up for the honey-flow. The principal flow is from the algaroba, and occurs during the summer months. All winter long the bees do nothing in the way of gathering surplus. What little they do gather is put into the brood-nest, with the result that, just prior to the algaroba flow, the brood-nests have about half the combs filled with honey. When the time comes for the bees to breed up for the algaroba, those frames of honey are taken out of the brood-nest, and frames with full sheets of foundation put in their place. By the time the bees get these sheets of foundation built out and filled with brood the algaroba flow is on, and the bees immediately lose all idea of swarming.

The bees are also given plenty of super room. When the first super is about half full of honey the second one is added. The frames are spaced eight frames to a ten-frame super. Gilbert has another theory that helps account for his bees not swarming. This theory, however, he admits "is but a theory;" but he *thinks* there is something in it. He believes that the bees are not inclined to swarm, because there is no place for them to go when they leave the hive. There are no hollow trees or other natural cavities that the bees can enter and use as a habitation. When once a swarm is cast, that swarm has to do one of two things—either hang on the limb of an algaroba-tree or return to the hive from whence it came.

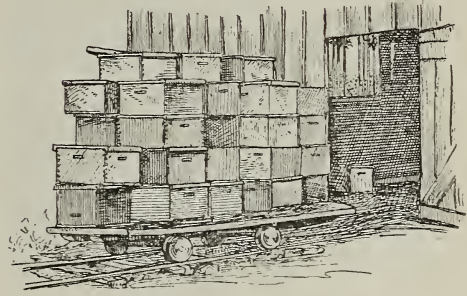
#### MANAGEMENT OF APIARIES.

With three hundred apiaries it is necessary that a well-developed system of management exist. This, Gilbert has. The apiaries are divided into four groups. Each group has a central apiary, and all work is directed and managed from these central apiaries. They are the distributing points for supplies. The making of foundation, and all other work of a like nature, is also done at these central yards. The Japanese, who are employed thruout the entire year, live at these central apiaries. Men are kept at most of the other apiaries during the honey-flow.

These central apiaries, where situated on the railroad, are of enough importance so that the railroad management considers them stations. One is called Gilbert, as is shown in (2) in the photograph. The vegetation in the picture is sugar-cane. On the opposite side of the railroad is one of Gilbert's algaroba forests; and it is in this forest that the apiary is situated. To give an idea of the completeness of this central

apiary at Gilbert, I took a picture of the pumping-plant, photograph (3). This plant furnishes water for general purposes, and for irrigation.

In some of the apiaries, as is shown in the accompanying photograph (4), a track is laid from the honey-house to the apiary. On this track a car is run on which twenty-



five or thirty supers can be placed, and the combs are taken to and from the extracting-house on this car.

All the hives have queen-excluders; and when extracting, the supers are taken off entire, bees and all. The method of driving the bees from the supers is very simple. First an empty super is placed on the ground, and in it is placed some smoldering burlap. On this super and over this smoldering burlap are placed the supers, bees and all, as they are taken from the hives.

They are usually stacked five high, and it takes but a few moments for the smoke from the smoldering burlap to drive all the bees from out the supers. The supers are then placed on the car and taken to the extracting-room. All the honey is taken off at an apiary before commencing to extract.

As a rule, at least two supers are used to the colony. When the first super is about half full, another super is added on top. When this first super is ready to be extracted it is removed and the other placed over the brood-nest. By reason of the foregoing method the actual time consumed in taking off the honey of seventy-five or a hundred colonies is very short. However, it necessitates having on hand at least two supers for every colony of bees.

#### EQUIPMENT.

All hives and paraphernalia connected with all the apiaries are of standard goods. The hives are ten-frame Langstroth; the frames are Hoffman; and the extractors are Cowan, everything being manufactured in the United States, and purchased thru agents.

Honolulu, Hawaiian Islands.

THERE are thousands of colonies thruout the United States left on their summer stands in northern latitudes with no other protection between them and the weather than a single thickness of  $\frac{7}{8}$  boards made into a hive. Such protection is altogether inadequate; and the only wonder is that all colonies in single-walled hives do not actually freeze to death. The records show that many of them do and many others survive the winter in a weakened condition.

One reason for this lack of protection is labor and expense. A quadruple winter case such as is recommended by the Government involves considerable expense for the lumber.

## CHEAP WINTER PACKING

*A Scheme for Winter Protection  
Requiring No Equipment Beyond  
that Found in Any Apiary*

By E. R. Root

already in a bee yard. The amount of protection afforded by it perhaps would not be as ample as that provided by the quadruple win-

ter case, but enough, probably, to provide sufficient protection for most northern localities—at least those south of the Great Lakes. The plan involves a scheme for using ordinary single-walled hives and supers, with a very little additional outlay for an inner case to hold the winter nest of the bees. Practically every extracted-honey producer must have one or two full-depth supers in addition to the regular hives for the brood-nest. These supers are not used during winter except to hold combs; and even if so used, the combs might better be stored in cheap racks put up in an ordinary honey-house. The equipment for wintering as we shall here outline it consists of an ordinary ten-frame Langstroth hive and two ten-frame full-depth supers. Practically every ten-frame colony can be squeezed on six combs. Now, then, if these six combs with bees are put into a cheap box made of  $\frac{3}{8}$ -in. lumber without ends, we have a complete outfit for wintering. When the first cool day comes, the bees with the six selected combs are put into the box just mentioned. The whole thing is then set on end in three hive-bodies tiered up on the regular stand. It will thus be seen that the frames holding the cluster stand on end. There should be a slot cut in the bottom end of the inner case holding the six combs, and a bridge should connect this slot with the regular hive-entrance proper; see Fig. 1. Packing material of any sort is now poured between the inner and outer case. If the bees are short of stores, a pie-plate of hard candy can be inverted over the top end of the inner case. If the combs are well filled with sealed stores, a telescope cover can be set over the inner case, or even a piece of burlap or old carpeting. Last of all, packing material may be poured over the whole until the top of the three stories of the regular hive is full, when the regular hive-cover is put in place. This leaves between four and five inches of packing. It should be noted that this arrangement provides a tall winter brood-chamber of small lateral dimensions which is theoretically, at least, the best possible shape to conserve the heat of the cluster.

In selecting combs it is advisable to choose six of the best, including those that contain

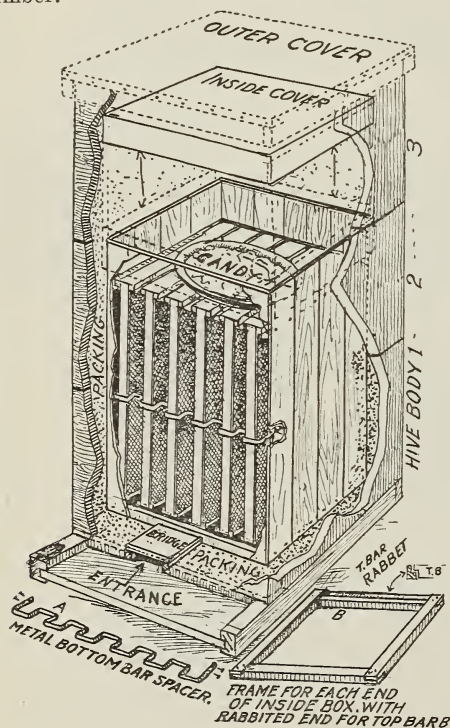


FIG. 1.—The Demuth method of winter packing. It consists of three hive-bodies, cover, and bottom for outer case and a six-frame box of thin lumber for inner case. This is stood on end when packing material is poured around and on top.

When we were visiting the Government apicultural building, at Drummond, Md., Mr. Geo. S. Demuth, one of the employees under Dr. E. F. Phillips, suggested a plan for wintering bees in single-walled hives that required little more than the equipment



some pollen, to provide for early brood-rearing. Then it may be advisable to feed a little sugar syrup to fill the combs solid full of sugar stores after the bees are packed. In lieu of sugar syrup, unsalable dark

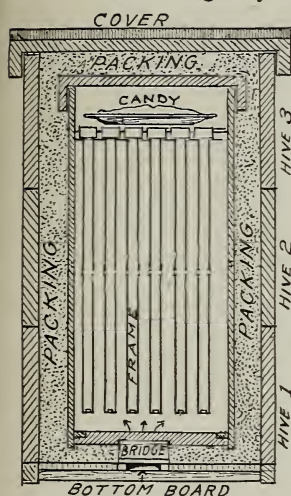


FIG. 2.—Sectional diagram showing the Demuth method of packing.

idea, we have had one end of the case lengthened out beyond the ends of the frames so as to provide this four-inch extra space for clustering room. This space may or may not be used; but if the colony is exceedingly populous, room could be given in this way. It might be a wise precaution to put above the frames a slab of hard candy.

It will be seen at once that the only expense involved will be a cheap six-frame box without ends made of  $\frac{3}{8}$  lumber to hold the cluster. The outer case consists of three regular hive bodies, cover, and bottom, which the apiarist already has. To hold the frames there should be a framework with a rabbet on one side as shown in Figs. 1 and 3. The cheapest kind of  $\frac{3}{8}$ -inch lumber can then be nailed around and the case is complete. No ends are required

beyond a suitable cover of a board or cloth for the top to prevent the packing material from mixing with the bees inside.

So far the directions for packing in this way involve the use of extracting supers. When one has only comb honey supers he can pack in this way, but it would be necessary to use twice as many supers, assuming that they are half the depth of the regular. They would work just as well as the deeper supers.

We do not go so far as to say that this is equal to the quadruple-case plan; but it probably would be equal to the much more expensive double-walled chaff hive. It certainly would be better than a single-walled hive; and if the plan were intelligently carried out it would be the means of saving tens of thousands of colonies throughout the northern states. The expense is so slight that there would be no excuse for the beekeeper not to use it. Of course, it will not be as handy as the double-walled hives; but it will save dollars and dollars of extra outlay.

It will not be too late in most localities to pack bees immediately after the receipt of this issue. "Better late than never" applies to packing bees.

While this idea of packing bees in this way may not be strictly new, the credit of suggesting it at this time belongs to Mr. Geo. S. Demuth. This inner winter case was developed and given a practical test in his apiaries in Indiana, so it is no untried theory, but has stood the test. A. I. Root, away back in the 70's, actually tried out a similar scheme of wintering, with one colony. The early files of GLEANINGS show that

it worked successfully. If the bees are packed early enough they would readjust their stores.

We would not advise the average beekeeper to try it out too extensively. We expect to pack ten colonies in each of our outyards to see how they compare with other colonies packed in Government or quadruple winter cases.

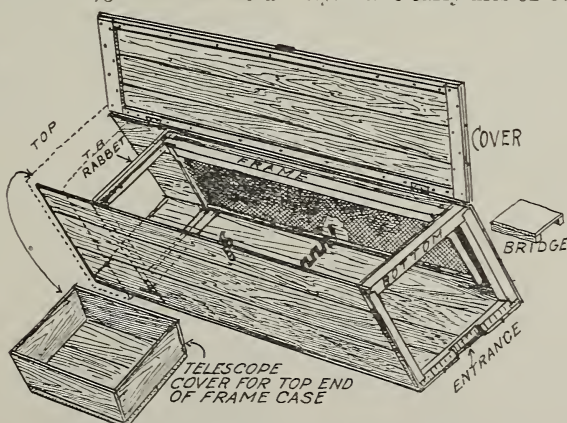


FIG. 3.—The Demuth inner winter packing-case. The drawing is out of proportion for the Langstroth frame, but it illustrates the principle. It is made of thin cheap lumber nailed around the square frames. These latter are rabbeted at the top to receive the ends of the six brood-frames. The lid is folded down, when the whole is set down on end in three hive-bodies as shown in figure.



### Conversations with Doolittle

"Shall we shade our hives in the apiary? If so, why, how, and when? Is it really necessary? Some beekeepers do not shade their hives; others do. Why do they so do? Do the ones that shade secure more honey?"

These are questions to which it is not easy to give definite answers; but it is desirable to know as much as possible about this matter of shade. The temperature of a colony of bees in the center of the brood-nest, when the bees are rearing brood, varies from 92 to 98 degrees, depending upon the size of the colony and the temperature of the outside air. Until the temperature in the sun reaches this point, shade is of no benefit—on the contrary, it is an injury, as it deprives the bees and brood of the warmth from the sun. When the temperature in the sun goes above 98 degrees, and begins to climb up to 105, 115, 125, to 140 degrees, then the bees are obliged to lower instead of raise the temperature in the hive. To do this they "cluster out," while hundreds if not thousands stand at the entrance of the hive, and with their wings create strong ventilating currents of air by drawing the hot air from the hive, while another set of bees on the inside cause the ventilated current of those outside to circulate all around the combs. At times of extreme heat ninety per cent of the bees leave the combs of brood and honey so that these ventilating currents have a better chance to go between all of the combs more freely.

At a beekeepers' picnic one hot summer day we were told that bees would "hang out"—that is, cluster upon the outside of the hives, instead of working, if their hives were left unshaded during a hot day, and that they were compelled thus to desert their hives to save their combs from destruction. This I think was rather "far fetched," for in times of a good flow of nectar, with plenty of unoccupied room in the supers, I have never known bees to stop on account of heat. With me, bees either cluster out when very hot from lack of room for storing in the supers, or from a scarcity in the fields. After the basswood flow is over, during the first half of August, the hives will be black with bees sometimes for a week or more during hot weather; but as soon as nectar begins to come in from buckwheat this clustering out is to be seen only during the afternoon after the yield of nectar is over. Weak colonies seldom make

any demonstrations of discomfort from heat, even when left unshaded, while strong colonies are puffing and blowing like a dog after a rabbit-chase. Why is this? Does it not look as if the strong colony were suffering from the accumulation of its own heat, that cannot escape fast enough? A colony is a living heat-producing body, and can be kept cool somewhat as we keep our bodies cool by wearing thin clothing, having a free circulation of air all about us, and by being protected from the sun's rays.

The color of the hive has a great bearing upon the necessity for shade. Black or any dark color absorbs heat, while white reflects or repels it. In red, brown, or black hives that stood in the sun, I have had combs melt down in spite of all the ventilation the colony could give, while I have never known them to melt in white hives.

The only time when shade is needed is from eight to four o'clock of our hottest days; and some temporary, easily removed shade is preferable to shade-trees. In fact, a permanent shade like that furnished by evergreens is an injury in the spring, robbing the bees of the benefit to be derived from the heat of the sun. After trying almost everything, I have settled on a light shade made of  $\frac{3}{8}$ -inch lumber,  $2\frac{1}{2}$  by 3 feet. This lumber is cleated at each side with a piece one inch square. On one end is nailed a 1 x 3-inch piece (on edge) as long as the hive is wide. When in use, this 1 x 3-inch piece rests on the north edge of the hive cover, the opposite end of the shade-board projecting beyond the south edge of the hive. The three-inch piece at the north is to raise one end of the shade-board three inches from the top of the hive, thus allowing a free circulation of air between board and cover. This shades the hive when shade is needed, in the middle of the day, or from about eight to four. In a windy location it is necessary to lay a brick or stone upon this board to keep it in place. Thus the bees will keep their places in the sections during the middle of the hottest days. With a board laid flat, or no shade-board at all, the most of these storing and comb-building bees will leave the sections during the middle of hot days.

For the comfort of the apiarist, it is well to have a few scattering trees in the apiary; but the branches should be trimmed high enough so they will not be in the way.

Borodino, N. Y. G. M. DOOLITTLE.





## FROM THE FIELD OF EXPERIENCE



### Letters from a Beekeeper's Wife

By the Hearth, Nov. 1, 1917.

Dear Sis:

Returns are in! You will be glad to know that our wholesale honey sold for a good price and as a result we have \$2250 in bank! It really seems too good to be true that we have all that money in a lump. We have never had such a good year since we spread out from our home apiary. I believe that each one of us has spent that money a thousand times in imagination.

Of course, I want it spent on the children and the house. Harriette will be ready for college next fall if she can take a little extra work this winter, so I want her to have lessons in French and German. Then Florence needs a new piano—ours is absolutely worn out, and the child has so much ability that I hate to hear her trying to get music out of it, altho I believe she could get music from a tin pan. And when I look at the house and see the painting and papering that needs to be done, I just ache to spend some money that way. Then if we *could* take a few of the good magazines that we long to be reading each month! Oh dear! I am dreaming again, when Rob has said that every cent we can spare must be paid on the principal of the mortgage. I suppose everyone has a specter in the background—ours is a vampire called Principal, that consumes everything we have.

I suppose winter is the bees' specter. It is always in the background, even on the sunniest day of summer. They must work and hoard every minute, and what is it all for? Winter, the inevitable, comes along with its icy fingers, and the summer stores in the cells gradually grow smaller. The poor little creatures don't realize that their specter is there while they work, and it is a blessing they don't. Now as I have planned how I would like to have the honey money spent, I have known all the time that it would have to go toward reducing that principal. However, it doesn't spoil the pleasures of dreaming—nothing can do that!

Rob has been packing the bees for the winter and I wish you could see them! We are putting four hives close together in a big box and filling in all around them with a thick layer of dry leaves. Surely with such a blanket they can't help but be warm. Isn't it wonderful how they know how to keep up the warmth of the hive themselves? Last winter we had some in the observation

hive just outside our bedroom window and they were as good as a thermometer. When the weather was cold the cluster drew together, but just as soon as it grew warmer, the cluster would spread out again. During cold weather, there was always a circle of buzzing bees in the center, working hard to keep up the warmth. Those in the circle of buzzers would give up their places to others, who would begin moving and buzzing immediately, so that the circle remained unbroken. Billy said he was going to watch until he saw two bees quarrel over whose turn it was to make heat, but that never happened. The harmony and obedience to law in a bee colony is marvelous, isn't it? We all felt sorry when that brave little colony finally succumbed to the cold.

This year Rob has given each of his colonies more honey than it can possibly consume during the winter, but he says he is going to make sure that none die of cold or starvation. This packing will soon be over, and then he will have time at last to read the file of old bee journals that he bought last May at a farm sale. He has been waiting patiently for the leisure to get at them, for he says that some of those old journals are better than much of the more recent literature. I wonder if he is right.

I hope your boys are over their colds. Give them each a hug for me. With love to you,

Ever your loving sister,

MARY.



### Sowing Sweet Clover with Wheat or Oats

A reader of GLEANINGS at Rock Island, Ill., wishes to know about seeding sweet clover with fall wheat, and with oats and barley the following spring. These are both good ways to seed, and under right management will surely prove successful.

This correspondent being located near Rock Island, Ill., his land no doubt will need a liberal application of ground limestone, which he can get very cheap from the Linwood quarries at Davenport, Iowa. Three tons per acre harrowed into the surface soil when the wheat is sown will put his land in fine condition. The seed can be sown either in March, and the weather allowed to cover it over, or it can be harrowed in the first dry spell after the wheat has started in the spring. I think I should prefer the former plan.

It is better to get the ground all plowed



## FROM THE FIELD OF EXPERIENCE

this fall, both for the oats and barley, sowing the finely ground limestone this fall and covering it lightly with a harrow. Then in April, one-third less of some early kind of oats may be sowed and one-third less of barley. Little difference will be seen in the yield of grain, and the quality will be better. Also the thinner stand of grain will give the sweet clover a better chance to make a stronger growth which will count much in preparing the land for the next planting of corn.

If the season is a wet one, there will be a lot of clover to turn under, and it should in no case be plowed before October, after the clover has made all the growth it will, both of top and roots. If the season proves to be a very dry one, and the clover does not make a large growth, then it will be best not to plow the land until the following spring, during the last half of May, when there will be clover standing not less than twelve inches tall. In either case, where a large growth is turned under it is best to double-disk the field, mixing the heavy green clover thru the soil. This will prevent the ground from drying out as it might if a thick layer should underlie the soil above it, thus preventing the moisture from coming up from beneath in a dry period after planting the corn.

In any season, sweet clover should not be sown later than the last of July, unless so late in the fall that it will not sprout before spring. It does splendidly sown in July when plenty of moisture is present to get it nicely started.

Obtaining a heavy growth of sweet clover according to the above description is a very efficient plan for preparing land to grow a heavy crop of good solid well-matured corn, as land thus prepared pushes the corn so fast that it ripens fully ten days earlier than usual. Twenty pounds of hulled seed is the right amount for one to sow, as the stand will be thick enough to repay well for the extra seed required.

Delmar, Iowa. FRANK COVERDALE.



### Moving Bees by Motor Truck

Having moved an entire apiary by motor truck, I have decided that my experience may be of interest to others. O. S. Mullin, of Holton, Kansas, sold me the apiary, which consisted of 80 hives of bees. These were in ten-frame hives, 13 double-walled and the rest single-walled. I wished to

move them from Holton to Chapman, Kansas, a distance of about 140 miles by road. If I shipped them by rail, they would need to be transferred twice and would be on the road for two days or more. I studied it over and decided to move the bees by motor truck and to send the metal tops and other supplies by freight. The truck that I hired (altho rated at only one and one-half tons) had been hauling two tons every day, and I figured that the bees would not make much over a two-ton load.

It took nearly two days to get the bees ready to move. Out of seven-eighths lumber Mr. Mullin and I made frames covered with wire screen. They were the size of the top of the hive, and 1½ inches deep. We removed the inner covers, and with eight-penny nails fastened these frames to the tops of the hives, thus giving the bees a clustering space about two inches deep. We closed each entrance with a folded piece of screen which we pushed in and fastened with a tack.

The bees were loaded on the truck from six to eight o'clock in the evening of August 1, and the start was made from Holton about nine o'clock. We did not weigh the load; but by the time we had traveled six or eight miles we knew that the truck was overloaded. Soon we came to a hill that was too steep for us, and it began to look as tho we would be unable to proceed. However, each time the motor died we blocked the wheel with stones, then sped up the engine, let in the clutch, and again advanced from one to three feet. By repeating this process we climbed several hills. About four o'clock, after covering twenty-five miles of our trip, we finally came to a soft place where there was a spring in the roadside. The hind wheel sank in, hub-deep, and we were stuck.

As soon as it began to get light I went for gasoline and water. We unloaded about half of the bees and pulled out of the hole. Deciding that our load was too large, we left twenty-two hives by the roadside, after opening the entrances so that the bees could fly. It was about half-past seven when we started on; and at nine o'clock we reached St. Mary's, where we secured a hose and gave the bees a thoro wetting, such as we had also given them on leaving Holton. I expected to stop and unload them if it became so hot that they showed signs of distress. But altho they seemed restless whenever we stopped, they would always quiet down on starting. And so by wetting them



## FROM THE FIELD OF EXPERIENCE



at noon and again at three o'clock we managed to get along until we reached Chapman at nine in the evening.

When I examined them I found two had the combs melted down and a lot of the bees killed. In a few hives there were some combs broken but nothing serious. However, the weather had been in our favor, for there had been some rain and the day was cloudy with a good breeze blowing from the south. If it had been a hot day I am sure that I would have had to unload.

I now had to go back after the hives we had left. We started with two Fords about 4 p. m., and reached the bees at eleven that night. We loaded and were ready to start back in an hour and a half. At seven the next morning we reached Chapman. The bees moved by the Fords did not come thru in as good condition as those that came by truck, for the Fords traveled so much faster that the side swing broke the combs worse. Still I did not lose any of this lot entirely, and therefore was pretty well pleased.

The truck hire and expense of running cost me \$50; the Fords, \$12 each; and the freight on the supplies was \$11. That made the entire cost of moving about \$85, which was a little higher than the freight would have been. Nevertheless I am of the opinion that it is the cheapest way to move bees any distance under a hundred miles, provided one does not carry more than 50 hives for every 3500 pounds of the truck capacity.

Chapman, Kan.

HARRY A. HUFF.



## Notes with and without Interest

On page 612, August, Dr. Miller asks about the flavor of sweet-clover honey. I think the very decided, spicy flavor is due to the presence of coumarin, and this would probably be very much in evidence, whether the honey was produced in South Dakota or Tennessee, provided it was pure, or nearly pure, sweet-clover. As to its being "of delicious flavor," that, of course, is entirely a matter of personal taste. However, most people who are accustomed to the mild-flavored white-clover or alfalfa honey, object to the strong flavor of pure sweet-clover honey, and are rather inclined to be suspicious of it. White honeys are usually milder than dark or amber, but sweet-clover and orange-blossom honeys are notable exceptions. Water-white orange honey from California is "delicious" for the first few meals, but I would not care for it as a steady diet.

Mrs. Allen says, p. 623, "well-built hives, strong colonies, vigorous young queens, plenty of stores, and contracted entrances, are about all we need." I think she has omitted one of the most important factors in successful wintering in this climate, and that is the use of two-story hives for winter brood-chambers. For several years I have been conducting some experiments in various methods of wintering, and the results show conclusively the value of the two-story hive. While I am not convinced that it would pay us to go to the expense and trouble of providing packing and winter cases for the bees, I am sure that the added story gives needed protection from cold winds, and provides room for more stores where the bees can easily reach them. Then a colony so wintered doesn't need to be disturbed until settled warm weather.

Weather conditions were unfavorable during the season in Tennessee, and the honey crop has been almost a failure, not more than a third of a normal crop having been gathered. The quality, too, is below the average. The bees, in some localities, will need to be fed for winter stores. In this connection, the Nursery Rhyme on page 628 might be revised to read,

And when he saw the clover bloom,  
With all his might and main  
He put the empty supers on,  
Then—took them off again.

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J. E. Crane wants to know more about lespedeza, page 614. This clover is proving a godsend to the farmers of the Cotton States, as it will grow well where no other clover will, with the possible exception of sweet clover. I am not sure whether it is hardy north of the Ohio Valley. In the western part of our state it grows spontaneously, just as does white clover in the central part. It furnishes fine pasture, and a large amount of good hay. Unlike the other clovers, however, it is of little value as a honey-plant, as it yields very little.

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In a recent inspection trip thru the western part of the state, I found the disease situation much improved over what it was a year or two ago. Dr. Ward also reports generally improved conditions in eastern Tennessee, altho several new foci of foul brood have been located. Many beekeepers are adopting modern methods, and becoming more proficient in the handling of their apiaries.

Franklin, Tenn.

J. M. BUCHANAN.



## FROM THE FIELD OF EXPERIENCE

### Motoring thru California

For a quarter of a century I did my traveling by rail, except one trip down the Sacramento River by boat and another up the San Joaquin by like conveyance. At another time I journeyed up the rugged northern coast counties in a two-wheeled rig drawn by a pinto bronco. This was mostly in company with the late J. H. Martin, known by his writings in GLEANINGS as the "Rambler." Three years ago, having more leisure than formerly, I decided to see California in bigger chunks than I had hitherto; therefore I bought an automobile; and, feeling as independent as any railroad president, I began my travels.



E. T. Flanagan, formerly of Texas, but now of San Gabriel, Cal.

On our first run south we also visited E. T. Flanagan, from whom I had previously purchased gladiolus bulbs while he was living in Illinois. He is a Virginian by birth, I believe, but lived many years in Texas, where he had large apiaries. For years he was an apiarist and dealer in bee-supplies at Belleville, Ill., but now is practically out of the bee-game, keeping bees only for the honey they supply his table.

While motoring to San Diego I came across an apiary on the roadside just after



An apiary on the Mexican border in California to which the bees undoubtedly smuggled honey across the line.

emerging from Boquet Canyon, in Los Angeles County, where there was a small wind-mill pumping a 1½-in. stream into a barrel. At the discharge end of the pipe a grain-sack had been tied, and draped in such a way that it carried the flowing water to the edges of the aforesaid barrel, some entering it, and more, I suppose, running down the exterior and the wood-work below. All over this water-drenched surface there was a mass of bees. They were literally falling over each other in their mad scramble to suck up a fill of the water. The day was a hot July one, and, I presume, there was no other water nearer than a mile or so, for we had not seen much in the lower part of the canyon we had left. No attempt was made to regulate the supply. It went trickling and dripping to the ground, except some which was piped to the house several hundred yards away.

Oakland, Cal.

W. A. PRYAL.



Nothing better than a piece of wet burlap to provide water for bees.





## FROM THE FIELD OF EXPERIENCE



### Advantages of the Shallow Extracting-frame

On page 359, May, Mr. J. E. Crane remarks, "I agree with R. F. Holtermann that a shallow extracting-frame is a first-class nuisance, p. 251, April." Now, admitting that the shallow frames have some drawbacks, I cannot let such wholesale condemnation of them pass without making a protest and saying a few words in their favor.

They really have many good points—the principal one, in my opinion, being that they are a great help to brood-rearing in early spring. In a climate such as we have in the coast region of British Columbia, spring often comes quite early, but the weather is very changeable. Brood-rearing often starts long before fruit-bloom; and sometimes as early as the beginning of April, or sooner, I have found it necessary to give the queens more laying-room than the single brood-chamber. It would not be safe at this time to put a full-depth second story on the hives; for, since much of the warmth would rise to the second story, a sudden drop in temperature would cause the bees to cluster too closely, thus allowing a lot of the outside brood to become chilled. A great many beekeepers would never notice this, as they do not care to disturb the brood-chamber by examining it at this time, and they would simply conclude that the queen was reluctant to go into the upper chamber; whereas the fact is, as soon as the weather was favorable for expansion she would be busy laying again in those cells where the chilled brood and eggs had been cleaned out. So, instead of increasing the amount of brood, the colony with a deep super would suffer a decided set-back.

If instead of a full-depth we had put on a half-depth super, the difference in temperature would not be so great inside the brood-chamber. The warmth being kept lower down would enable the cluster to expand more, covering the brood, and the queen would more readily go above to lay. If the queen is capable of occupying still more room after the half-story above is filled with brood, another half-depth super can be put on above the first.

In this locality we aim to have very strong colonies early in the spring, as we have several sources of possible surplus before the clover begins to bloom. In 1914 I sent a fully capped and ripened *shallow frame* of honey that was taken from full supers of surplus maple honey on April 15

to the permanent exhibition of British Columbia products at Vancouver. Of course, this was an exceptionally early season following a mild open winter; but it goes to show that we cannot neglect any method of coaxing our queens to early and continuous laying, thus producing strong colonies ready to store surplus from our abundant maples, golden willows, etc.

Then, again, the shallow frame is useful as a means of separating honeys from different sources and of doing so with less waste in the grading. Often we find our deep supers contain a nice crop of clover that only partly fills the combs when the bees commence to bring in a darker-colored honey. The combs may be nicely capped half the way down the frame; but lower down the cells will be only partly filled with a thin unripe nectar. To extract from these combs at this time means extra work with the danger of having considerable unripe honey; but if we allow such combs to stay on the hives until properly filled and ripened, we get a mixture that is below par, with a consequent loss in grading. The obvious advantage then of using the half-depth or shallow frames is that we can take off the capped clover or other first-class honey separately, leaving the lower half to be completed with the poorer grade.

Another reason why I like the shallow frame is that it is so much handier to give these for winter stores than to feed syrup or liquid honey. The job can be done quickly and easily, and is especially adaptable for those who winter on the summer stands.

A great deal has been written lately in favor of wintering bees in two stories. Apparently the main advantage in this plan is that the space between the upper and lower sets of frames enables the cluster to move bodily from one side of the hive to the other. To get the fullest benefit from this plan, the combs above would have to be full of honey right down to the bottom-bars and the colony a fairly strong one. In the first place, I consider that a full super of honey is far more than is necessary for wintering. And in a long winter of continued cold weather, if the colony was not better than just fairly good, there would be the danger that it might contract itself to three or four frames and move steadily up to the oilcloth under the cover, where the bees would be in danger of starving with cold slabs of honey at each side of them, just as they often do in a single-story hive.

## FROM THE FIELD OF EXPERIENCE

In order to reach other frames of honey when their available stores ran out, they would be compelled to leave the top of the hive, which is naturally the warmest part, and to travel the depth of the full frames. This they could not do without breaking the cluster. This is only a remote possibility that may occur during a long hard winter; but how much safer it would be to give for winter stores a shallow extracting-super full of honey! The warmth from the cluster over the late fall brood does not rise too far above them; and it is a very poor colony indeed that can not obtain access to the whole of the frames from side to side during the coldest weather. They have the advantage of the space between upper and lower frames at all times, and there is more than sufficient honey in a ten-frame shallow super for any average colony to winter on.

Moreover, it is easier to give outer protection to a 1½-story than to a two-story hive. There may be a little extra work at extracting time with the shallow frames, but even this is offset by many of their minor advantages, such as less wiring, stiffer combs in extracting time, and better adaptability for producing chunk honey, etc. So with all due respect to such successful beekeepers as J. E. Crane and R. F. Holtermann, I think I will not discard my shallow extracting-frames—at least not in the locality where I practice beekeeping.

St. Johns, Que.

A. W. FINLEY.

[Knowing that Chalon Fowls and his daughters were strong champions of the shallow frame we referred Mr. Finley's letter to them. Miss Fowls replies:]

The above article meets with my most hearty approval. Just now, when some of our strongest and most vigorous young men are going to war, leaving the apiaries in charge of women and old men, it seems a good time to point out the advantages of shallow frames.

In hauling and in extracting, the shallow combs are less liable to breakage; and altho others may differ with us, we have always considered it easier to uncap two shallow combs than one deep one. We keep only enough deep supers to forestall swarming and to insure plenty of winter stores. And we get a much nicer grade of honey by keeping the brood out of the supers and not interchanging much after the season begins.

One day of lifting when the crop is on the hives makes us staunch advocates of the shallow frame and causes us to forget any

slight disadvantage caused by handling two sizes of combs during the rest of the season. Of course, if one feels that nothing can quite compensate for the thrill of pride in exercising a strength so herculean that 60 or 70 lb. supers may be tossed about all day as mere toys—I say if one feels like this, let him just insert his tool under two supers instead of one.—IONA FOWLS.



### Another Advocate of the Shallow Frame

In another issue of GLEANINGS, in reporting a beekeepers' convention which I think was in Ohio, R. F. Holtermann is credited with making the statement that he would quit beekeeping if he were obliged to use the shallow extracting-supers, and you agreed that was the general opinion among the majority of beekeepers.

I believe Mr. Holtermann was sincere in the statement that he made, and no doubt it would entail too great an expense to make the change. But why should the wheels of progress be stopped by old and extensive beekeepers who have had *no* experience in the subject of which they talk? It is the same argument that old box-hive beekeepers had against the movable-frame hive.

For a number of years I have been testing these shallow supers, and I have come to the conclusion that, by proper management, the labor in beekeeping can be reduced from 25 to 40 per cent, especially in running outyard work. I have wondered many times why beekeepers in running outyards resort to extracting-outfits on auto-trucks and wagons, unless it is from the fact that large supers are too cumbersome to handle, and hauling them is too dangerous to the frames of honey. Then, again, from all the articles I have ever seen in GLEANINGS I have yet to see anything on how the honey was taken home when extracted at an outyard. I find, and know from years of experience, that my labor of transporting extracting-supers to outyards and back again with the honey in them is not much greater than the time of taking the tinware out and drawing the honey home in tin cans, the only difference being the extra weight of combs and supers. Altho I will not stop to explain them now, I find, in the use of the shallow extracting-super, a whole system of advantages thruout the entire season.

Chatham, Ont.

W. A. CHRYSLER.



RECENTLY

a certain Tennessee sideliner bought some more bees—twenty colonies. He had planned to take his negro man

with him to get them, but said negro man was temporarily laid up with an accident to his foot. So Mrs. Sideliner was appealed to. Now this particular Mrs. Sideliner is an energetic little lady, so she promptly decided to take the trip for the experience and the fun. Two mules were hitched to a wagon, and they started on their trip—a distance of about fifteen miles. The first part of the way the roads were good; but thruout the latter portion of the journey they had many ups and downs. There, for much of the way, the road followed the bed of a creek. You know how such a creek road goes—the pebbly and too often rocky creek bed is followed all too faithfully, except when it goes winding off in too long a curve; then the road gets independent and goes its own more direct way until the wayward creek winds back again, when again they emerge. Bumpity-bump, bumpity-bump, over the rough way they went, and it was late and dark when they finally reached the home where the beekeeper lived who had been drafted and wanted to sell his bees.

Thru some misunderstanding, this man had thought they were coming in the morning, and so had had the wire cloth over the entrances all day. Two of the strongest colonies, crowding their entrances, had generated enough heat to melt down the combs, and had perished. Loading up the remaining eighteen, they started back at about the hour they had expected to get home.

It was so dark, and the road so difficult, that Mrs. Sideliner with a lantern in each hand walked ahead to find the way. Slowly but surely they covered about a mile, when suddenly lurch, smash—off came a wheel! And slipping, sliding, tumbling—off came the hives! likewise Mr. Sideliner. Fortunately he was unhurt. Fortunately, too, the excitable mules behaved like gentlemen and officers, and there was no panic. But, you see, there they were—right there. Yet they couldn't very well stay there. Neither could they possibly go on home. So they conducted a retreat, purely strategic, of course. Unhitching the mules they left the hives and broken wagon and start-

## Beekkeeping as a Side Line

Grace Allen

ed back to the place where they had bought the bees.

A wagon-trail that follows a creek bed is bad to ride, but worse to walk;

but they circled around thru the dark and the dewy weeds, and at last filed, infantry and horse, as it were into the yard of the astonished man whom they had left a couple of hours before. Here the mules and the lady put up for the night. But Mr. Sideliner went back with his lantern to guard his new bees; for, in the tip-up, combs had smashed, two or three colonies were destroyed, and honey was running out on the ground. Almost as soon as he got back to the dismal scene, some hogs found it, and off and on all night he had to drive off those un-Hooverian hogs. A little fire in the lee of the wagon helped make the chilly night comfortable.

As the dawn finally broke, a near-by farmhouse gradually showed out of the darkness, and soon a man appeared, busy about his chores. Suddenly he seemed to discover the patient beekeeper there by the side of the road, keeping watch over his bees and his smashed-up wagon. He turned to the house. "Put on some more coffee!" he shouted up to his wife and strode out to greet the stranger. Over all the other's protests, he insisted on his coming in for breakfast.

Cheered and warmed by the hot strong coffee and the food and the friendliness, the beeman at last got his wagon repaired and his party reassembled; and in due time they reached home with fifteen hives of bees to add to their apiary, and an interesting experience to store away in their memories.

But how about that method of making increase?

### AN ENTHUSIASTIC SIDELINER.

One of the most enthusiastic of sideliners is Mr. G. B. Mays, of Champaign, Illinois, to whom we have referred once before in this department. Being a conductor on a railroad, Mr. Mays must realize the value of the many branch lines that go running off from the main line, hauling in freight and passengers and profits that the main line could never gather of itself. In quite the same fashion, out into the great territory of life's limitless opportunity go all our little side lines, and they bring us in a wealth of experience and pleasure, and





Sideline apiary of G. B. Mays, Champaign, Ill., a "mainline" railroad man who knows the value of a side line

possibly profit, entirely separate from that being hauled in by our main line of work.

Switching back now to Mr. Mays, you can see in the picture his long side line of bees, and also glimpses of his garden and fruits. He enjoys that garden, too, and thoroly appreciates all the good things that it yields. He keeps his bees chiefly for pleasure, tho of course he turns many a pretty section into cash. By keeping only the gentlest of bees, he has no trouble with his neighbors; and anyway they are generally each presented with a nice section of honey when the crop is taken off.

Doubtless his success is due largely to his enthusiastic interest and study and care. Yet he claims he has an excellent location, and he does mention a good succession of flora—dandelion and fruit bloom, white clover and sweet clover, with smartweed and aster in the autumn lasting till killed by frost.

#### AS TO LOCALITY.

This matter of locality and the flora thereof is necessarily one of prime importance. Take our own bees here in West Nashville; they have practically no fruit-bloom, and almost nothing after white clover fails—a little honeydew in late July, a very little smartweed in August, some bitterweed. Fall feeding, if not unavoidable, is at least the rule. This year we extracted more conservatively than ever before, yet we shall have to feed some of the precious sugar we are all trying to save, as there is considerably less honey in the hives at present writing, early in October, than when we extracted in the middle of July.

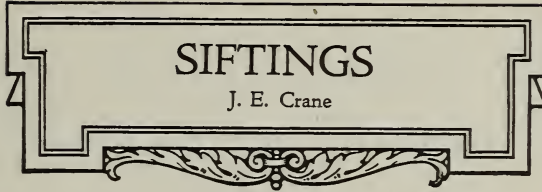
A few days ago a pleasant errand took me two or three miles from home, still within the city limits, tho where they go rambling off in another direction into the country. Leaving the trolley at a point where I had never been before, I looked around a bit

while walking leisurely up the street. A honeybee went sailing by, and right there where I passed her a vacant lot was riotous with heartsease and white aster! And it certainly looked as tho all the open spaces around there were far more friendly to the bee needs of autumn than our own stretches of ragweed and sweet anise.

"Sow sweet clover," quoth Mr. Bartholomew, when he noticed our roadsides and vacant places recently. Well, may be we will if we have any money left after buying sugar and winter cases.

And speaking of flora, here is a suggestion for this winter—study botany a bit as well as beekeeping—beginners, and any other sideliners who have not already done so, not because we need to be deeply versed in botany to keep bees, but because it is such a natural and lovely companion study to beekeeping, and practical, too, withal. By becoming somewhat familiar with some chosen text-book during the winter we shall be so much more alert and eager when the spring miracle opens Nature's own book again. Then the printed page should take strictly second place, as all the beautiful blossoming lives tell their own stories one after another. A walk along a country roadside takes on added charm when you can greet the growing things by name, and know their ways and their manner and their kin, as does a tramp thru the woods when you know the trees. The pleasure begins with the first interest, there is such great delight in the learning of things. Furthermore it is of real value, of such practical use to the beekeeper. Did you read what Mr. Doolittle said, page 764, October, about a beekeeper he once visited? Planning on basswood he was, and how his bees would work it, when basswood bloom had already come and gone! And the bees had not had enough room for the honey.

A FEW days ago I learned that my neighbor had been selling his extracted honey at last year's prices. He had not learned that the price of honey had gone up! He could not afford to take a journal devoted to the interests of beekeepers.



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G. M. Doolittle is certainly sound in his advice on page 764, October, as to beekeeping as a profession or means of support. The greatest difficulty seems to be the uncertainty of the seasons. We can master the wintering problem, the springing of our bees, swarming, dysentery, and even foul brood; but we can not control the seasons or the flow of nectar. Perhaps this is best, that we may not forget our dependence on the good Lord for all our blessings.

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I have always regarded beekeeping as favorable to good morals, but have never carried the matter as far as those old writers that "A Beekeeper's Wife" has brought to our attention on page 765. Rarely do we find a beekeeper who is profane, altho I have known such. The handling of bees has a tendency to make one thoughtful, patient, and helpful.

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Many years ago I had a number of cases of American foul brood, and I found all that was necessary was to shake the bees into an empty hive and let them build new combs while the honey was strained out and the combs melted up for wax. After the honey has been thinned with water, and boiled, it is perfectly safe to feed bees during the spring. I have tried it.

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Mr. P. C. Chadwick gives some good reasons for the instinct of bees to rob, page 682. He says, "The queenless colony has no hope from nature after all possibility of requeening is passed; the colony is on the decline; and without the aid of man it must die. So why should not instinct lead other bees to save that which their neighbor is too weak to care for?" Beautiful economy, surely. And his illustration of Nature's economical ways he might have carried further by stating that when the bees have removed the honey to a safe place the wax-moth lays her eggs that soon hatch and reduce the combs to webs and powder so as easily to mingle with the earth and

nourish new plants with their blossoms and fruit. The inspector sometimes sees the whole process going on in the same yard as the result of disease. Not long ago I visited a yard where I had urged speedy attention to save what remained. I found nothing had been done by the proprietor; but nature's methods went straight on, and I found some hives that had been robbed, and no less than six where the larvæ of the wax-moth had reduced the combs to powder, while the ignorant owner was in blissful ignorance that anything unusual was occurring. Disease often destroys a yard of bees, and the millers get all the credit.

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The October number of GLEANINGS is of special value to young or inexperienced beekeepers, owing to the full discussion of the wintering problem. We had almost forgotten that it was of so much importance. We put our colonies in shape for winter, year after year, with as little concern as to how they will come thru the long cold months as we have as to how we ourselves shall winter. The high price of lumber will doubtless have a tendency to prejudice many in favor of indoor wintering.

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E. R. Root, page 788, gives two good methods of cleaning up combs of honey after extracting. Another and more expeditious way is to place an empty brood-chamber over a strong colony after first removing the honey-board, then tiering up as many supers as convenient on top. The advantage of this method is that the combs are cleaned up very quickly.

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Ruth C. Gifford, page 770, October, seems a little mixed in nomenclature of mice. Wood mice is the proper name for these pretty mischief-makers, rather than field mice, in these parts. We have another mouse that lives in the fields, known as the meadow mouse, that very rarely or never enters a hive, as they are vegetarians.

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I spent much of my time during August in cleaning sections of propolis. It was somewhat monotonous work, but after all interesting, as it gave us a fine time to study the individual characteristics of different colonies, and select some choice colonies or queens for breeders next year.



THE wealth of information in October GLEANINGS about wintering conditions helps to bring out the point that many

things must be considered, and that no one rule can apply to all localities. Speaking of Mr. Doolittle's locality, Mr. Byer says, p. 756, "he lives considerably south of us, and should at least have a climate no colder than ours." But it isn't altogether a matter of latitude, nor, indeed, of coldness. As emphasized by Editor Root, the matter of surrounding shelter is of great importance. Bees may winter perfectly in a protected apiary, and poorly in one unprotected in the same neighborhood, altho one is just as cold as the other. I'm still further south than Doolittle, and likely the thermometer registers higher here than at Markham; but the probability is that if Byer lived here he'd winter in cellar, and if I lived at Markham I'm pretty sure I'd winter out. Altho colder at Markham than here, I don't suppose Markham has the *long-continued* chilling winds we have here, and those winds are the things that drive my bees into the cellar. [After having been in both localities we are inclined to believe that your locality is colder than Byer's. You are about 45 miles from the lake, and Mr. Byer is only 10. You are right. You cannot lay too much emphasis on the importance of windbreaks. GLEANINGS expects to keep urging it until beekeepers everywhere recognize that a screen to protect bees is necessary if not essential in winter in the South as well as in the North.—Ed.]

MR. EDITOR, you say, p. 591, that when swarming threatened "we put on an upper story with an excluder between. All sealed or hatching brood was placed above, and all unsealed brood with the queen was placed below." Please tell us why that was better than putting sealed brood below and unsealed above. Also why it was better to put up only part of the brood instead of the regular Demaree plan of putting up all the brood, with the possible exception of one. [The reason is partly given in the reference. The object of putting the hatching brood above is to relieve the brood-nest of too much brood and at the same time supply room in the supers when the brood hatches out, which it will do within a week. In this way the super capacity will continue to be ahead of the bees as they begin storing above. If, for example, there are six frames

## STRAY STRAWS

Dr. C. C. Miller

of sealed or hatching brood put above, there will be in about a week six frames of empty cells available for honey without any action

on the part of the beekeeper. The purpose of putting unsealed brood below is to keep the bees more contented. If we put the unsealed brood above it would be two or three weeks before the cells would be vacated for the honey, which, in our locality, might be too late. We do not claim that this procedure is better than the Demaree plan, but as it is used by some good extracted-honey producers we decided to give it a trial, with the result that we are much pleased with it. There was practically no swarming where it was tried. To answer your question directly, putting all the brood above is too much of a good thing, as it is quite liable to result in the building of cells upstairs. If we could put all the hatching brood above with no unsealed there would not be any material for building cells. Understand, we are not advocating this as the best practice for all localities, but as one of several good plans for the production of extracted honey.—Ed.]

C. G. G. is advised, p. 789, to take out combs that contain American foul brood and substitute combs of honey from other hives, and then treat by the shake plan next spring. If after there is no longer unsealed brood in the hive, he takes away all combs, replacing with healthy combs of honey, there will be no need of further treatment, for that's just the treatment given by the late W. E. McEvoy in his latest years, and it has much to commend it. There is no interference whatever with bees or brood, only the loss of the diseased combs. The plan deserves more publicity. I've tried it. [You probably left an interval of 24 hours between giving the combs of honey. If you took away the diseased combs and gave combs of honey at the same operation we see no reason why the bees might not store some of the diseased honey in their sacs in the combs given. Anyhow, is it not safer to advise the beginner to be on the safe side?—Ed.]

RAISING the hive-cover hinders rather than helps ventilation, some think, says P. C. Chadwick, p. 700. I think Doolittle holds that view. P. C. says, "I am rather of the opinion that this may be correct when the temperature reaches 120 degrees in the shade." If there were no bees in the case,

it seems certain that an opening above and below would induce ventilation automatically whenever outside temperature was either higher or lower than the temperature in the hive. And that would make it easier for the bees to ventilate *if* they would take advantage of it. But their instinct seems to make them circulate the air in such a way as both to draw in and expel the air at the entrance. That makes the case a little uncertain. It's important to know, and some day may be Dr. Phillips will tell us. I'm very confident, however, that in my locality it's a big help in hot weather to have big openings both above and below. [If the bees have a certain method of procedure in ventilating by means of which a current of air is forced into one side of the entrance and sucked out at the other side, when you raise the cover do you not make it impossible for them to force the air in on one side and to pull it out on the other? In other words, don't you interfere with their regular scheme? A common pump will not work if there is a leak anywhere in the pump or lining.—Ed.]

P. L. W., p. 788, wants to feed at an out-yard without carrying anything but the dry sugar. Years ago I did so. I put dry sugar into a Miller feeder on the hive, and then poured in water, hot or cold. That's all. The same thing might be done with a friction-top pail having holes punched in the cover. [This may do all right in an emergency; but we believe it would be advisable to mix the sugar and water thoroughly, and then apply heat, either at the outyard or at home. The trouble we found with the plan above is that the sugar does not entirely dissolve in the water. The mixture is only a thin syrup. In the fall, especially in the late fall, the syrup should be thick. For early fall feeding, the dry sugar and cold water will do very well; and the thinner the syrup the better for the bees providing it is not *too* thin.—Ed.]

I FIRST read about the disappearing disease in Australian bee-journals some years ago, and I understood it was called "disappearing" because of the mysterious disappearance of the bees. Now it is said to be so called because of the sudden disappearance of the disease. Which is right? or are both right? [Both are right; and therefore "disappearing disease" is a good name.—Ed.]

"THE BOTTOM-BAR of the Hoffman frame is too weak for an extracting-frame. It should either be made thicker or as wide as the end-bars are at the bottom." Thus P. C. Chadwick, p. 700. My frames have bottom-bars 1 1-16 wide, same as top and end-

bars, and they work well for extracting. [The Hoffman frame is used by many honey-producers who run for extracted honey, and who find no fault with the bottom-bar as it is. But that is not proving that a wider or stiffer bottom-bar would not, after all, be better. If there are others who side with P. C. Chadwick, let them speak up.—Ed.]

MRS. ALLEN, p. 696, seriously questions the statement of the bulletin, that indiscriminate swarming is the general practice in Tennessee. I accepted her view till a little later she spoke about men trying movable frames, as if box hives were the common thing, and then I didn't feel so sure, for box hives and unlimited swarming are likely to go together.

HARVEY A. ARMBRUST has sent me a worker-bee that is short on eyes. Instead of a compound eye on each side, it has only one, and that is centrally located. He says "I have only about a half dozen of these one-eyed bees, and they come out at the playspells. When they try to fly they seem always to come down on the grass, and crawl and buzz away and are lost."

A. I. ROOT, your estimate of Dr. Barker, p. 798, is all right; but if you ever hear Billy Sunday you'll revise your opinion as to the comparison of the two men. I've heard both, and in comparison would say that Dr. Barker is a zephyr and Billy Sunday a cyclone.

ON PAGE 744 I read that an Idaho association has sold its honey at 13½ cents a section, and is offered 13½ a pound for extracted. If the price should continue the same on each, good-by to comb honey. All the better, in these war times.

J. E. CRANE, you say, p. 771. you don't worry if your bees have sugar and pollen, as pollen has the necessary elements for brood. Does pollen have all the necessary minerals contained in honey? I confess I don't know.

R. F. HOLTERMANN gives the reasons, p. 674, for glassing sections, and now I'm wondering whether R. F. will hereafter be a glasser. Anyway, it's delightful to hear again from so good a man as P. H. Elwood.

GETTING bee-glue off the fingers with gasoline, alcohol, or lava soap is all right, p. 630, and the plan I've generally used is often more convenient. Rub well with a little butter, and wash with soap and water.

MY BEES, as I expected, have stored enough for winter, and a little surplus in extracting-combs. But I can't afford to extract it—worth more to give back to bees next spring.



LET me tell you a story.

Five years ago a very busy man, manager of a chain of theaters thruout the eastern part of the country, broke down in health. No food seemed to agree with him, and he was so reduced in flesh that he weighed only ninety-six pounds. When he left his office to go home at night his private secretary scarcely expected to see him alive again, as he was so extremely frail. The doctors not being able to help him find a diet that agreed with him, he began to experiment for himself. I don't know just how much experimenting he did before he began eating honey, but he found that it agreed with him. For five years he has been eating honey in large quantities and very little other food. He has eaten as much as three pounds of honey in a single day. For lunch he has a section of honey and a glass of buttermilk. I don't know whether he eats the whole section. He is now sixty-four years of age, weighs one hundred and fifty pounds, and, best of all, he is turning out more work than he ever did before in his life. He himself told this to the head of the Puerden household, who was showing him around The Home of the Honey Bees. One rather strange feature of the case is that it must be comb honey. He says extracted honey seems to have lost that peculiar quality which makes it agree with him so well. He does not care particularly for the white honeys; indeed, he shares one strange taste with the Puerden family (all the family but Stancy, who hates it) in that he likes buckwheat honey and thrives on it. Mr. Puerden gave him a couple of sections of honey over a year old, and asked him to test them and report. He said in substance, "I can tell you right now if you wish to know about old honey. I like it and rather prefer it." His way of buying honey is to send for a section at a time until he finds some just to his liking, and then he sends back and gets the whole case. Don't you think he deserves the title "The Honey Man" even more than A. I. Root, for he must be literally made of honey?

I have told you this story just as it came to me. Don't jump to the conclusion that I am going to feed my two growing boys and small girl on an exclusive honey diet, altho it would simplify housework very much, wouldn't it? The Puerden family will still eat as well balanced a ration as I can manage, but my respect for honey as a

## OUR FOOD PAGE

Stancy Puerden

food is increasing all the time. I wonder if Uncle Sam is not making a mistake in asking us to use honey to release more sugar for

export. Perhaps if honey were added to the daily ration of the soldiers it would so increase their energy that the war would soon be ended!

### ANOTHER STORY.

May I tell you another story? May be the managing editor will re-christen this department "The Story Hour;" but, honestly, these stories are true, and they just wouldn't keep.

Some years ago, when I had time to be a member of a literary club, the subject "Pure Food" was assigned to me. It was a good subject, but quite beyond my powers, and I began to look around for help. One of my brothers handed me a book, "Starving America," by Alfred W. McCann. Well, that book took hold of me and never let go until I had read it clear thru. I had always been more or less interested in food values, and considered myself fairly well informed; but that book was an eye-opener. My club paper was nothing but a review of the book, as comprehensive as I could make it in the limited time allotted me. When I finished reading the paper there was a little round of applause, and I had to make haste to disclaim any credit, as the paper was entirely from the book. Today Mr. Puerden called me up and told me Alfred McCann was on his way to visit The Home of the Honey Bees. I begged to be allowed to entertain him at lunch, and the powers that be thought it might be arranged. It was on Tuesday, ironing day; my young Hungarian helper was busy with the ironing; there were various vegetables threatening to spoil if I did not get them into cans—and the managing editor had just called me up (or down) to say my copy must be handed in at once. I told the managing editor he and the vegetables would have to wait. It pays to be firm with editors. Then I proceeded to prepare the following menu:

Broiled ground steak  
Scalloped potatoes  
Steamed summer squash  
Tomato, green pepper, and cucumber salad  
Hoe cakes Comb honey  
Grapes

Everything but the meat and the cornmeal came from our own garden, and in a few weeks we shall have our cornmeal, home

ground. So far as Mr. McCann was concerned the meat and grapes could have been omitted, for he ate neither. He cares little for meat if he can get fresh vegetables. He seemed to enjoy the potatoes, squash, and salad, and he ate so many hoe cakes accompanied by honey that he had no place left for fruit. We had been discussing food values, so I felt free to say, "Mr. McCann, do you mind telling me where you get your protein in a meal such as you have just eaten?"

"Where does the horse get his protein?" he returned quickly.

Then he went on to tell us that he firmly believes in a low protein diet; that he is convinced that almost every one eats more protein than is needed. But if we are to depend upon grains for our protein and mineral salts we must make sure we are getting the whole grain before it has been robbed of its most valuable constituents by the modern methods of milling.

Several have asked me if hoe cakes can be baked in anything but gem-irons. They can, and good ones too; but the irons are more convenient, as they can be heated so hot. Whatever baking-dish is used should be shallow, as the hoe cake must be principally crust when baked. We have had very good ones baked in aluminum muffin-pans, but the pans must be very hot, and the cakes baked thoroly until they are crisp and crusty. Government experts have found that, considering its food value, cornmeal is the cheapest food there is; and as hoe cakes contain nothing but meal, salt, and water they form as cheap a food as can be found in these times of high prices.

Do I hear some one say, "Is Stanley Puerden ever going to stop talking about cornmeal?" No, I don't suppose I shall as long as the war lasts and there is need of wheat conservation. Have you noticed by the papers that our corn crop is the greatest this country has ever known? We ought to be very proud to eat cornmeal, for it is a food "made in America." America introduced Indian corn to the world. While cornmeal is such a valuable food for us, it would be of little use to ship it abroad under present conditions. It does not keep as well as white flour; and to be at its best it should be freshly baked and eaten hot. Stoves and ranges with ovens such as we use are almost unknown abroad. All the bread is baked in large public ovens; and in France particularly, wheat bread forms a very large part of the diet. If our Allies can stand between us and our common enemy while our nation is getting up an army to fight, surely we can make a little sacrifice in our eating. I signed one of the food-

pledge cards, sent out by the Food Administration some time ago, and have tried to feed my family in accordance with its teachings. Recently our fourteen-year-old boy said, "Mother, you are getting up the best meals ever lately." He has evidently thrived on the meals he enjoys too, for he has gained ten pounds since last spring. Put it down to war diet, work in a war garden, or both, as you please.

On page 773 Dr. Miller asks if I have tried the method of putting a small piece of paraffin in the bottom of the jelly-glass before pouring the hot jelly in. I had read of that way several times, but my common sense told me that the jelly would not become firm if it were covered while still hot, as evaporation could not take place. However, to be able to speak with authority, I tried it, and the joke is on me. The paraffin hardened and covered the jelly nicely; and when I removed it the next day the jelly was as firm as that in the other jars waiting to be covered.

#### OUR THANKSGIVING DINNER.

Below is a Thanksgiving dinner which should not offend the Food Administration.

#### THANKSGIVING DINNER.

Maryland, chicken  
Dressing  
Mashed potato  
Creamed turnips  
Pickles Jelly  
Lettuce with French dressing  
Whole-wheat bread  
Pumpkin pie de luxe  
Cheese  
Mixed fruits and nuts  
Coffee

Most of the materials called for should have been produced in your own or your neighbor's garden. Turkey may be substituted for chicken, if preferred; but if you eat turkey you are likely to have no money left for liberty bonds. For the dressing, use bits of bread and toast left from the table which have been dried in a warming oven and put thru a meat-grinder. Store the dried crumbs until needed in a jar with a thin cloth tied over it. Do not cover it with an air-tight cover or the crumbs will turn rancid. When you are ready to make the dressing, moisten the crumbs with hot but not boiling water. If the water is boiling the dressing will have a slippery texture. Season the crumbs with sage, salt, and pepper, and a bit of onion; put in a baking-dish with some of the liquor and fat from the roasting-pan dipped over them, and bake forty minutes to an hour. A beaten egg is an improvement, but may be omitted.

A dinner salad should be light. If you

*Continued on advertising page.*



**M**OST beginners will winter bees more successfully out of doors than in a cellar. Bees in confinement—that is, those in hives having no entrance to the outside—should never be wintered in a room above the ground where the temperature changes from one extreme to the other. If the colonies are left in such a room, each hive must be located close to the outside wall and must have a separate entrance so that the bees can fly whenever the weather permits. In a cellar where conditions are right, bees will winter in a semi-dormant state and will require no entrance to the outside. A cellar where vegetables keep perfectly is usually considered safe for bees; but for best results the temperature should not go much below 40 degrees F. nor above 50. For two or three colonies no special provision is needed for ventilation; but the air should be reasonably dry. It requires some experience, however, to know just when conditions are right—when to put the bees in and when to carry them out in the spring;

## BEGINNERS' LESSONS

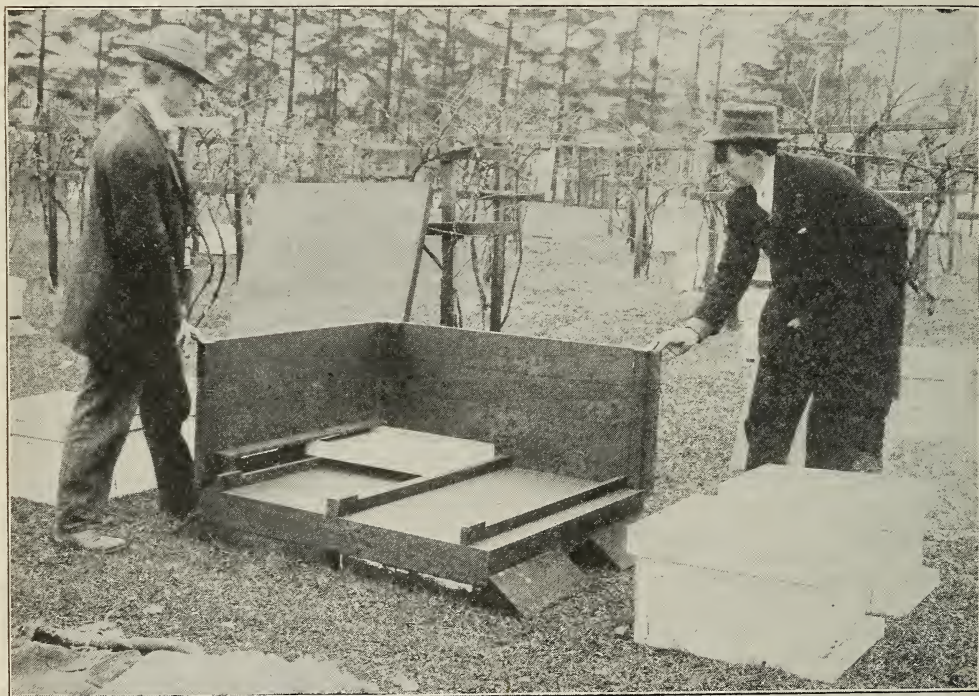
H. H. Root

so in the majority of instances outdoor wintering is the safest for a beginner.

Except in localities far south, extra protection other

than that afforded by the single-walled hive is necessary. Even in the south-central states, winter packing is beginning to be looked upon as a wise precaution—safety first.

Winter cases are usually for one hive or four hives, altho two-hive cases are coming into use somewhat. The amount of packing depends upon the latitude, also upon the amount of exposure to cold winds. A colony in a spot protected by trees, buildings, or other shelter, and with only two inches of packing, will winter better than one in a hive having six inches of packing, but standing right out in the open where the bleak winds have a full sweep. For a single hive, or even for two hives, a common store-box may often be used enough larger to give about six inches of space at the sides and top for packing material. Of course the passageways into the hives must

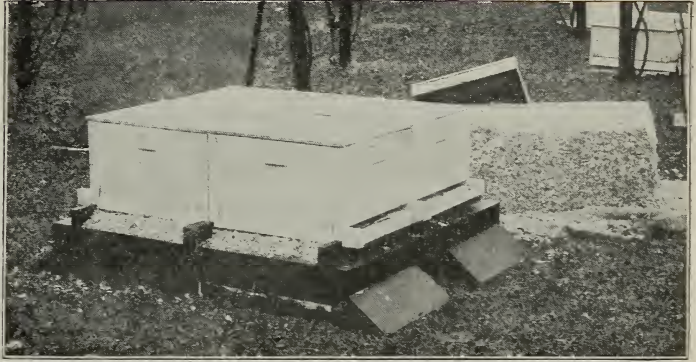


Special floor-board, cleated to hold two pairs of hives back to back. Two sides of the winter case are held in position to show the relative position of the parts. "A bridge" across the entrances prevents the packing material from closing the opening into the hives.



be bridged over so the packing will not fill up the entrances. A water-proof cover must always be provided; for the packing material, whether it be dry leaves, chaff, or fine shavings, must never get wet.

The four-hive case is the same in principle, altho it is seldom that a box large enough can be found, so the case has to be made for the purpose.



The four hives in position ready for the sides of the packing-case.



The walls in place and the packing material added.

If not already standing in a group the four hives must be brought together gradually, each hive being moved only a few inches a day so the bees will not become confused. After being located on a platform, the two pairs standing back to back, the sides of the case may be nailed or screwed together at the corners and the packing added. Aside from the expense there is no objection to even eight or ten inches of packing. The material should be packed

down just enough so that it will not settle.

A winter case may be put on any time after the colonies have been fed, and it may be left on in the spring until all the cold unsettled weather is over. In fact, this method of wintering is more nearly "fool-proof" than any other, and with plenty of young vigorous bees, good stores, dry packing, and a sheltered location, the beginner may snap his fingers at Jack Frost.



The water-proof cover finishes the winter case.



H. S., Ohio.—I have a lot of unfinished sections from goldenrod. If I put these under the brood-chamber will the bees take out the honey and carry it up? or would it be better for me to put them on top of the brood-chamber next spring? If the bees take the honey out of the sections, would they be travel-stained?

A. We would not advise putting the sections under the brood-nest at this time of the year. Put on an upper story; place the unfinished sections, if the colony is short of stores, on top of the brood-nest. Over the whole, place a burlap or carpet, and then pour in packing material. If the colonies are well supplied with stores in the brood-nests we would not advise giving the sections this winter, but wait till next spring, at which time they may be given in the manner explained. We would not advise disturbing the brood-nest or colonies at this time of the year if they have sufficient stores to carry them thru to next spring. The sections might be soiled some if put on the hive as explained but not badly.

V. C. P., Illinois.—Kindly advise me in regard to the best method to use in the manufacture of honey vinegar. I am advised that vinegar made of a solution of rainwater and honey is superior in quality to other kinds. At what degree of concentration should I have the solution? I have access to a commercial hydrometer for testing the specific gravity of liquids heavier than water.

A. It is true that vinegar made of honey is superior to any other article on the market, even cider vinegar. The one difficulty, however, is that the honey vinegar costs more than cider vinegar; but it is enough better to warrant the extra price. However, a great many beekeepers will have considerable honey washings from utensils, especially during extracting. These washings can be set aside and converted into vinegar. Enough water must be added to the honey so that the liquid when thoroly stirred will just support a fresh egg, leaving a portion of the eggshell sticking above the water by about the size of a ten-cent piece. This was the rule given by Mr. E. France. Others who use the ordinary hydrometer say that the scale should register at about 11. This liquid should, of course, be kept in a warm room to hasten the action.

J. M. C., Alabama.—I wish some one would tell us how to keep bees from robbing feed-troughs where people are feeding velvet-bean meal. The bees run the cows out and take possession—also try to take possession of the mill where they grind the beans. The miller has to use smoke before he can measure up the meal.

A. There is really nothing that can be done except to see that the bees are liberally supplied with natural pollen in the combs the fall previous. A "counter-attraction" may help somewhat; but by the time the bees get started on meal fed out by the bee-

## GLEANED BY ASKING

E. R. Root

keeper they will find natural pollen, which they much prefer, and ignore both the feed-troughs and the counter-attraction. Where the bees have

given trouble in the past, it would be well for the local beekeeper to have rye meal exposed under sheds, where the sunshine can get at it, and where they will find it before they will go to the feed-troughs on a neighbor's farm. The trouble will last for but a short time, and the beekeeper would do well to sweeten up the neighbors with a dozen or so sections of honey or a gallon or two of extracted. Above all things, the beekeeper should see his neighbors and sweeten them up before the bees get to working in the feed-troughs if the trouble has occurred before.

A. L. B., Indiana.—I once had bees cluster in a funnel shape in the super where there was no honey. The small end of the cluster reached down into the brood-chamber where there was honey. They were in this position several weeks in cold weather. How did the big end of the cluster get honey to live on?

When a colony forms three clusters between four combs, has the middle cluster any better chance to pull thru a cold spell than the outside clusters?

Sometimes there is a little cluster of live, dead, or dying bees entirely away from the main cluster. Why those little clusters?

I have a full-depth super full of extracting-combs on an American-foul-brood hive with queen-excluder between. Is it safe to use the extracting-frames and super this season without treatment?

A. When bees cluster, the same bees do not remain in the same part of the cluster very long. If you watch closely you will find that there is a constant changing, the outside bees getting to the inside and the inside bees to the outside. If the weather happens to be very cold, and the cluster is spread out considerably, some parts of it may be cut off from the main part. This accounts for a few bees found in a starving or chilled condition off at one side.

Under ordinary circumstances the bees when clustered on combs are so compact that they are practically one solid mass. The bees enter the cells and thus conserve the animal heat. There is a slow and almost imperceptible changing of bees, even when compactly clustered, and for this reason all of them stand about the same chance.

You run great risk in using extracting-combs over a colony diseased with American foul brood, for these combs may contain a little honey. Furthermore, there may be some dried scales of dead brood reared in the combs before the excluder was put on. Our advice is, not to use any such combs. It is not safe.

It would not be safe to use the brood-combs from the lower story at any time. It is always safer to melt those up in case of American foul brood. Then scald the frames

and burn the inside of the hive-body with a gasoline blow-torch until the wood is scorched.

C. H. H., Wisconsin.—How can I move bees without giving them a flight in the spring before moving them? I have 200 colonies in a cellar in Minnesota, about 150 miles from here, and I want to move them as soon as possible in the spring, and it would save me some expense and much trouble if I could load them as I took them out of the cellar; but I did not think it would be safe to load them without first giving them a flight.

A. A good deal will depend upon conditions. If the bees go thru the winter without any signs of dysentery, and appear to be otherwise in good condition, we see no reason why you could not load them direct from the cellar on to the wagon or automobile truck. If the hives are spotted up in front we would advise letting the bees have a flight before moving them.

A. J. D., Massachusetts.—I have tried double-walled hives, but do not like them, because they have a tendency to sweat inside. This makes them very damp in all seasons.

A. There is no more reason why a double-walled hive should be damp inside than in one with single walls. As a matter of fact, the double hive should be dryer, because the moisture from the cluster of bees will not condense so readily. Cold will penetrate thru a single wall much quicker, and when the warm breath of the bees strikes the cold sides the moisture will condense. Your climate is somewhat damp, and your difficulty can be remedied by putting a burlap over the top of the brood-nest rather than a solid board cover. Over the burlap should be placed packing or a tray of packing material. The moisture will go up into the packing, leaving the inside of the hive dry.

O. S., Virginia.—I use Danzenbaker hives and 4 x 5 section-supers. Next year I wish to produce extracted honey with shallow Danzenbaker frames in these supers, also the full-depth hive body. Is it not a good plan to put one of these shallow frames on each side of the sections? What size of extractor will I need for these frames?

A. In producing comb honey there is a decided advantage in placing a shallow frame on each side of the sections. As bees prefer the comb, they begin work in the super much more readily. For extracting Danzenbaker combs you will find the standard extractor to be quite satisfactory.

C. E. P., Minnesota.—What is the proper temperature of a bee-cellar for winter?

A. In former days 45 degrees Fahrenheit was considered the right point; but the tendency now is toward a higher temperature—say 50 degrees. But with this higher temperature there should be plenty of fresh air or the bees will become very uneasy before spring. If the ventilation is limited, a temperature of 45 degrees is better. Where a furnace is used in an adjoining cellar a temperature of 50 or 55 degrees may be used to advantage; but there must be a window in the bee-room thru which ventilation can be

secured from the outside. If the furnace-room door is left open slightly there will be a constant change of air. During extremely cold weather it may be necessary to close the outside ventilator.

A. N. C., New York.—Is it practical to unite three or four two and three frame nuclei in November?

A. They can be united; but such a colony is never as good as a fair or medium colony all from the same queen and from the same hive. These small nuclei when united never seem quite to make up a normal colony—probably for the reason that the several families do not immediately form into a homogeneous mass. Moreover, the mixture of combs, each containing some stores, leaves the food scattered. When a colony is united in this way it should be fed thick syrup.

C. J. F., Illinois.—It is generally recommended that colonies be not shaken for American foul brood late in the fall. Is it possible to unite two or more colonies after shaking them on to foundation? I do not wish to have any foul brood around next spring.

A. This can be done; but 24 hours after uniting on the foundation the bees should be fed on thick sugar syrup—2½ sugar to one of water—and the syrup must be given hot. It may be advisable to give another feed after the bees have drawn out their combs partly.

C. H. W., Michigan.—Can liquid food be given to bees as late as Nov. 15?

A. Yes; but the syrup should be 2½ parts of sugar to one of water, and it should be given hot. We have had colonies winter fed late on food composed of 2½ parts of sugar to one of water, and they came thru in nice condition. As a general rule we advise earlier feeding if it is needed—not later than Oct. 1, for most northern localities. The bees can then place their stores properly, seal them over, and form a winter nest. Hot syrup for late feeding should always be given at night, to prevent the bees from flying out and becoming chilled if the weather is cold.

A. C. L., Wisconsin.—Could a ten-frame colony that covers all of its combs with bees on warm days, in October be crowded into less space with division-boards on the sides?

A. It is advisable to take a couple of combs having the least stores and crowd the bees down into the smaller space. It may be advisable, in case of a colony not too strong, to crowd them into a six-comb space; but the combs should be full of stores; and if not, the bees should be fed. See article, p. 842, on DeMuth's method of bee-wintering.

P. P. A., New York.—I have trouble in making my labels stick to tin. Can you help me out?

A. Ordinary paste will not hold a label on tin as well as on glass; however, very good results can be secured by purchasing dextrine, which usually can be obtained of the dealers or at the drugstore.



## HEADS OF GRAIN FROM DIFFERENT FIELDS

An Effective Way  
to Get Rid of Any  
Ants Living in  
the Ground

containing a small amount of water. I think I can give a better remedy than that, especially for ants that den in the ground.

Trace the ants to their den by watching the line going to and from the hive. Then take a small funnel and pour a little kerosene oil into the den and close the hole. By using a funnel one gets the oil in the right spot with very little waste. The oil should be poured in until it fills the hole. A cupful is enough to destroy two or three dens. I should be glad to have some of the beemen try this method, as I have tried it successfully for three years.

N. E. Davis.

Roxboro, N. C.

I notice in Gleanings, February, page 131, Mr. C. E. Fowler's method of trapping ants by means of a tub

Bee Convention No  
Place to Settle Be-  
ginners' Questions

Those who attend bee-  
keepers' conventions  
merely to learn are  
making a big mis-

take. The place to learn beekeeping is right at home. For what purpose do we have all these extensive works on bees and bee culture? Why are such journals as Gleanings, American Bee Journal, Domestic Beekeeper, etc., issued? Why the bulletins on this subject? Let the beginners particularly understand that these state and national conventions are not held for the purpose of teaching them the "A B C of Bee Culture," but for the purpose of acting.

I would not overlook nor belittle the social advantage afforded by our bee-meetings; and a beekeeper may well spend money and time in travel in order to become acquainted with others who are engaged in the same pursuit with him. Surely attend if it is possible; but the time is too valuable to thrash out beginners' questions. No man can afford to travel many miles to go to such big conventions solely for the purpose of learning.

The Standard Oil Company may be able to map out a yearly program in a few hours, but the beekeeping fraternity is not as fortunately situated; it has thousands of stockholders with a diversity of interests; they are scattered over the whole of the United States, and it is not a very simple matter to map out a program for such a body. Furthermore, should ever so good a program be mapped out by those who take the lead, the next thing would be to have the members stand by it. This is where we fail, and always have failed.

Local associations and county societies hold beekeepers' institutes for the purpose of instructing beginners. Here any simple question may be asked and answered, or more complicated questions discussed, but the state beekeepers' convention is not the place for it.

F. Greiner.

Naples, N. Y.

Too Much Air  
Pumped Into  
the Honey

Our honey is warmed to  
130 degrees, and then  
strained into a tank  
from which the pump

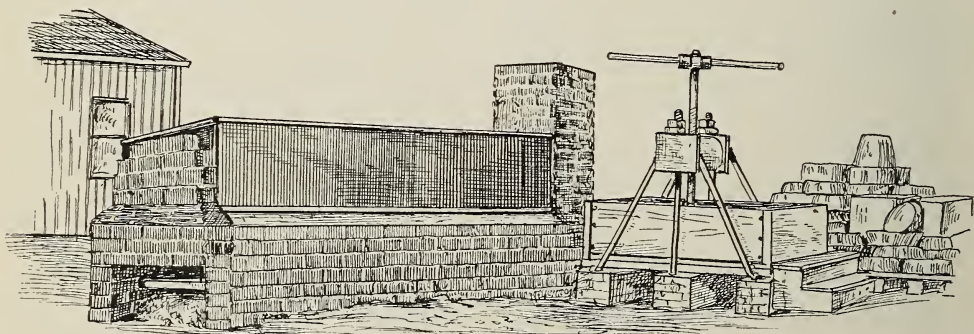
in the basement raises it 16 feet thru a pipe that runs from the top of the extracting-house to the honey-house where the honey is run into two tanks, one upstairs for filling small pails, and one downstairs for filling 60-pound cans.

I tried first to run the pump all the time, but the honey got cloudy from pumping so much air with it. After that I allowed the tank in the basement to fill up and stopped the pump when it became empty. That works all right, only I have to take care that the honey does not get so cold that the pump will not handle it.

This year I had some 30,000 pounds of honey, and have sold over half of it. I run a regular mail-order honey business, and sell almost entirely to consumers. As demands are on the increase every year, I am never worried about selling my honey.

Brush, Colo.

Daniel Danielson.



Danielson's comb-melter and wax-press.

## HEADS OF GRAIN FROM DIFFERENT FIELDS

Awakening  
Interest in West  
Virginia

has been lately developing thruout the country. At the annual field meet of the Panhandle Beekeepers' Association held Aug. 22 at Triadelphia, W. Va., the Department of Agriculture of West Virginia considered it worth while to have a "movie-man," N. E. Mehrie, of Charleston, W. Va., attend the meet and make a film of the doings. Chas. A. Reese, assistant entomologist, of West Virginia Dep't of Agriculture, was instrumental in obtaining these pictures, which we understand are now being used in the central part of the state. They were taken solely for educational purposes, and are to be shown in the theaters wherever desired by the local beekeepers' associations.

We had a very profitable time at the meeting. Not all the speakers were there, but all of the inspectors were present and each one gave an interesting talk.

Elm Grove, W. Va. Will C. Griffith.

We have just had another proof of the increasing general interest in beekeeping that

A Suggested Variation of the "Put-up Plan," for Swarm Control

Dr. C. C. Miller:—In case of swarming with the two-story plan, when do you usually have the swarming—

before or after reducing to one story? How do you usually treat them? If more than one way, please give the most common one.

I suppose that all the different ways in "Fifty Years" refer to using only one ten-frame body, not to two eight-frame stories for brood-chambers. How would the following modification of your "put-up" plan work, when using two eight-frame brood-chambers? When the swarm issues (clipped queen), or several days later, shake the bees off the frames of sealed brood in front of the hives, putting these frames and queen with a few bees in a hive above the cover of the other hive, which will have the unsealed brood, nearly all the bees, and supers. Put the combs of honey or pollen in either hive, according to the amount of sealed or unsealed brood and of course cut all of the queen-cells. In a week, put down the queen,



West Virginia beekeepers getting in the limelight. A "movie man" was engaged to take pictures at the Panhandle field-meeting Aug. 22.



## HEADS OF GRAIN FROM DIFFERENT FIELDS

leaving the upper hive until the brood all hatches, cutting cells if necessary. Then shake the bees in front of the lower hive, keeping the combs to be used as a second story the next year. Would these combs be reasonably free from honey and pollen?

C. A. Colell.  
Lincoln City, Del.

The two stories are left only until time for supers, when all are reduced to one story (not ten-frame, as you say, but eight-frame, altho it is possible that ten-frame would be better for all the time); and swarming practically never occurs until there is only one story. Then the treatment may be any of the plans given, perhaps as common as any being the "put-up" plan.

The plan you propose would leave the combs containing considerable pollen and honey, the amount depending on how much brood was present at the time of swarming; for at that time the combs would be full, and any cells not containing brood would be filled with honey or pollen. Frankly, I don't believe your scheme to keep over these combs without any bees on them would work out very satisfactorily.

C. C. Miller.

How the Bees Miss Euphemia M'Isaac, Helped on the the owner and operator of the Cranford farm, Fruit-Farm near Benton Harbor, Michigan, had a King apple-tree that would not produce fruit. She sprayed it, scraped its bark, trimmed its branches, but the King simply kept on soldiering on the job, and the owner was without any recompense save that of its shading branches which kept the sun from one end of the porch.

Miss M'Isaac then turned to the last resort. In proper season she located four colonies of bees right under the tree, whereupon the little workers fell to an immense pollenization job.

This year the tree seemed to make up for its failure of other years. There seemed to be an apple for each blossom, and Miss M'Isaac is giving most of the credit to the bees.

Miss M'Isaac is a city-raised woman; who with her sister left off nursing humans in a city hospital to nurse soil into producing fruit in Michigan. Her success has been pronounced. She now conducts an eleven-acre place on a hilltop. In thirteen years she has not had a crop failure. She keeps about ten colonies of bees. They work on fruit-bloom in the early season, and on buck-wheat, which she sows between the rows, later on.

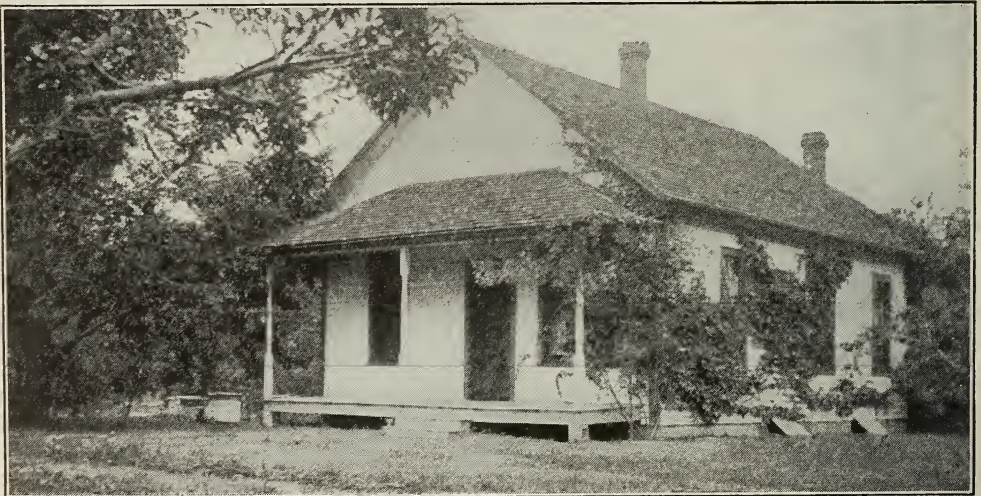
J. L. Graff.

Chicago, Ill.

Does the Public Like the Darker Honeys?

On reading the article by A. C. Miller on page 600, August, we are not sure that we quite

agree. We have three grades of honey here—the spring (or dandelion) honey, which has a light-yellow color; the clover and alfalfa, which is white, and the fall flow, a mixture of clover and rabbit-brush. We try our best to keep these three grades separate, extracting from the brood-nest about June 10 in preparation for our alfalfa flow; then in July and August we extract in order to be ready for our fall flow about Sept. 1. If we did not do this, we should have a dark honey thruout the season. We do not feed



Miss M'Isaac's home and apiary. Ten colonies of bees are kept, principally for pollenizing fruit-blossoms.

## HEADS OF GRAIN FROM DIFFERENT FIELDS

sugar, but let the bees winter on any sealed honey they have.

The three grades are sold at the same price, and we feel that we give value received. The public has learned to know the difference in the grades, and yet to buy and eat it all. They buy the darker grades in 5 or 10 lb. lots, some of it for winter use, but most of it for summer, since it is just as good for canning fruit, and while in the liquid form is quite as good to eat. Then for winter use we fill the five-gallon cans with our white honey, as it granulates with a finer grain than the darker honey, and also has a better flavor after granulation.

We stand behind every can of honey we sell; and people know that, if they are not satisfied, the money will be cheerfully refunded. But so far we have never had a single can come back, which seems to prove that the dark honey has given good satisfaction.

M. L. Skougard.

Parowan, Utah.

Disturbing the Bees in the Cellar      Some beekeepers say in effect, "Don't monkey with the bees in the cellar during the winter."

Well, it may be good advice to some people, and perhaps to most; but I have a habit of placing all light colonies where I can "monkey" with them.

Of course some will immediately exclaim, "You should not have light colonies," and I at once reply, "Locality!"

Our honey-flow often does not start till August and lasts till the first heavy frost in September, and it may happen that some particularly good honey-gatherers have a craze for putting it in the supers and leaving the brood-chamber weighing only 50 pounds—cover, bottom, and all. Then a heavy frost may be continuous for a few nights, succeeded further by such chilly weather that it is difficult to feed. And now a further excuse: I have to help with the thrashing and we and the neighbors are always short of help. Thus it results that there are always a few light ones to go into the cellar.

About New Year's day I open the light hives and lay a frame of honey on top. Sometimes I draw out an empty and insert one near the cluster. So far I have never seen anything wrong with this practice. Of course the queen starts laying. Last year I fed only one, which was a weak colony with a fine-looking queen of good Italian stock; and when I carried that hive out in the spring there were ten frames of fine-looking bees. I fed some combs of honey and divided, getting a queen from Alabama, and soon had two strong colonies.

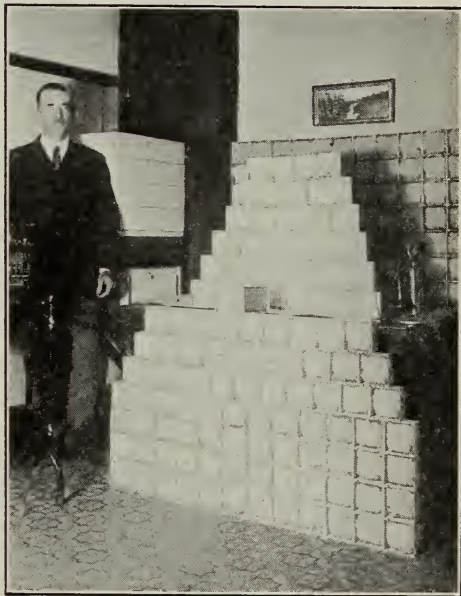
There was one fly in the ointment, however — the queen of the fed colony soon

started laying drone eggs too frequently, and I was obliged to kill her and introduce another at a cost of 75 cents. Taken all together I consider the increase I made in the winter as profitable as any manipulation I ever made with bees. I have four or five hives at present; and if I have continued success I plan to build a new cellar with more room and to keep all late swarms apart for cellar increase.

W. J. Boughen.

Valley River, Manitoba.

Good Returns from a Colony in a City Block      The accompanying picture shows the honey I took from a colony of bees which I have in my office on the third floor of the Vatel Block at the corner of Jackson and High streets, Muncie, Ind. This colony is located in the center of a city of about 28,000 population, and yet I took from them last season 252 sections of honey. I think this a pretty good production for such a location.



Honey produced by one colony in a third-story window of a city office building.

The bees were in an observatory hive which I placed in my office in order to create an interest in bee culture among the schoolchildren of Muncie and Center Township. As it turned out, I learned a few facts myself—one being that bees consume great quantities of honey. I also learned that, tho the temperature of the room was never lower than 65 degrees, still the queen did not begin to lay until about March first.

Muncie, Indiana.

W. D. Carter.



## HEADS OF GRAIN FROM DIFFERENT FIELDS

Honey-house and  
Hives are all  
Home-made

The accompanying illustration gives a view of our bee-house and workshop, also showing a part of our apiary. The house is 12 x 24 x 8 feet, is built on concrete foundation, and cost \$114.14 for material. The work was



done by myself, as I happen to be a carpenter. The hives too are home-made, but do not look much like the usual hives made of dry-goods boxes.

Conneaut, Pa.

C. Klabuhn.

Empty Super if  
Above Gives Com-  
fort; Below, Pre-  
vents Robbing

Dr. C. C. Miller:—Sup-  
pose the main honey-  
flow this summer  
should end about Aug.  
1, as it frequently does

here, and all comb honey were removed from the hive (Buckeye), how would it do to place an empty super on the hive for an air-space so the entrance might be contracted to prevent robbing? I should like to leave the bees for two weeks at that time, and I fear things might go wrong in my absence. No doubt you could tell me of a better scheme.

Columbus, Ohio.

J. H. Diebel.

If I get your idea, it is that during your absence you want to leave the bees only a small entrance, so they will easily protect themselves against robbers, and lest there should be any approach toward suffocation you plan to put an empty super on top, so as to give more air.

If there is no robbing immediately before your departure, with colonies reasonably strong, it hardly seems possible there should be any robbing, even with full entrance. But suppose you do contract the entrance, with no other precaution. If it becomes uncomfortably warm there is nothing to prevent the bees from coming out to sit in a bunch at the entrance where it is more comfortable. Still, your empty super on top would probably make it at least a little more comfortable, and could do no harm. It is just possible those bees might take it into

their heads to store a little surplus while you were gone, in which case the super would come in handy. But while you're about it, if you are flush with empty supers why not put one under as well as on top? Robbers are averse to crossing any confined space where they cannot take to immediate flight if attacked, and the empty super below would tend to safety, even without any smaller entrance.

C. C. Miller.

War Prices in  
Denmark; Crop  
About Thirty-two  
Pounds per Colony

For several years I liv-  
ed in California and  
kept bees as a side line,  
until ill health caused  
me to leave for Den-

mark. A year later my father died, leaving me to look after his work, which included the care of about thirty colonies. I am going into this work in a more extensive way and am trying my best to make things move. I am taking up American methods of bee-keeping and have also started commercial queen-rearing.

No one here uses the Langstroth hive; but in time they probably will, when they find how much easier it is to handle. I have twenty home-made ones now in use. In this country we have to use the double-walled hive, as the weather is very changeable in the spring and early summer when brood-rearing starts.

In the past three years I have made a



Papaya tree on the honey farm of U. Trista, Santa Clara, Cuba. See editorial.

# HEADS OF GRAIN FROM DIFFERENT FIELDS

fair surplus; but this year was the best, my bees giving me from 20 to 125 pounds (Danish weight), which measure is a little more than the English pound. All together from 25 stands, spring count, I received 800 pounds. On account of the war, prices are up and we are getting from 30 to 40 cents a pound, which is more than we have ever obtained in this country.

Altho there was a heavy loss in bees in the winter of 1915-16, many old beekeepers having a total loss, still those having a few stands left were enabled by the unusual swarming to increase their number of colonies and to obtain a fair yield the same year.

The weather from early spring till the latter part of June was very cold; but the first of July it became warm, and the wild wisteria gave us quite a little surplus. In some years we get our sole crop from this plant. Then the white clover came on, and from then until August the bees gathered quite a lot of honey.

Tobjerg, Denmark.

James Clausen.

Second-Hand Vinegar-Barrels Unsafe for Any Kind of Honey.

Grawn, Mich.

Would it be all right to put buckwheat honey in used vinegar-barrels that are scalded out?

Howard Anderson.

[We would not recommend the use of second-hand vinegar-barrels. The staves would be soaked up with water, and the honey, after it had absorbed this water, would be almost sure to leak out in spite of all you could do. Using second-hand barrels is a rather risky proposition any way; and in case of vinegar-barrels, in addition to the danger of the shrinkage of the wood we are afraid the honey might be injured.—Ed.]

When in immediate need of a queen-cage in an outyard, roll a strip of foundation from a section into a cylinder  $\frac{3}{4}$  inch in diameter and pinch the end down together. After securing the queen, close with another strip.

Boulder, Colo.

E. C. Bird.



THE BACKLOT BUZZER.

BY J. H. DONAHEY.

*Speakin' of honey, what's the matter with buckwheat cakes and honey, or buckwheat honey and buckwheat cakes? Say, Maw, pass the honey.*



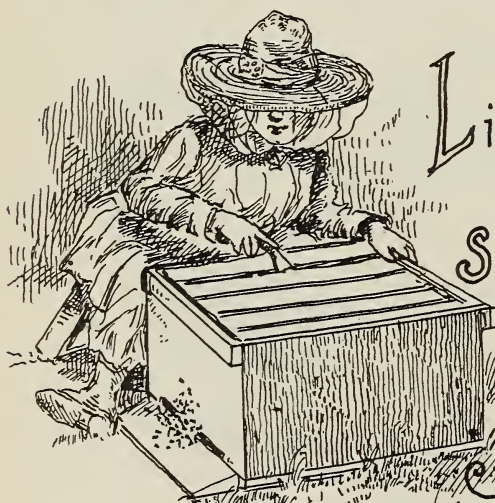
# Mother Bee NURSERY RHYMES

By M.G.P. (*Mother Goose Plagiarized.*)

*Dishonest Horner sat in a corner,  
Scraping his sections clean,  
He stuck in his thumb, and then looking glum  
Said, "Well, I'll put that in between."*



*Little Bee Lover  
Sat on a cover,  
Scraping the burr-combs  
away,  
Along came a worker  
But she was no shirker,  
And so she decided to stay.*



# GLEANINGS FROM THE NORTH, SOUTH, EAST, AND WEST IN CALIFORNIA

P. C. Chadwick, Redlands, Cal.

NO greater cause for disease can be found than

the lack of abundant stores, which means weak colonies, the easy prey of disease.

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Scarcely a day has passed since mid-August that smoke columns have not announced brush fires of magnitude. In the region of Perris, Riverside County, the Cleveland forest reserve, and near Fillmore and Sespee, the greatest damage has been done. Many square miles near Sespee were devastated, with reported loss of life and bees.

\*\*\*

With our Government placing sugar at a figure of about eight cents, with the possible restriction of the amount used per capita, we are led to wonder if honey will be left in the unrestricted luxury class as is now the case in Europe or whether the price will also be fixed by the Government. Whichever it may be there is little danger of 7-cent honey for some time to come.

\*\*\*

The draft net has caught many of the younger beekeepers of our state. We ought to lend a helping hand where desired in keeping secure their holdings until they may return. War is not to the liking of any of us; but when necessary, as in our present situation, those who bear the brunt of the dangers should not be forgotten by their fellow-beekeepers who may be able to help them out during their absence.

\*\*\*

I am glad that no less a personage than the editor of the *American Bee Journal* has come to the same conclusion as myself regarding capping-melters. In an article on page 345 of that journal he says, "In fact it is impossible to secure out of the capping-melter anything but an inferior quality of honey. For that reason we have discarded the capping-melter." That has been my contention for a number of years. I have stuck to the capping-box and the solar extractor as a means of securing the best possible quality of honey, altho I have been classed as antiquated in that respect. Now I have at least one man of authority on my side of the question.

\*\*\*

Wesley Foster in *American Bee Journal*, October issue, page 339, says, "Light amber

honey of equal flavor is worth as much as water white;

and the time is coming when it will bring the same price." In this I feel that Mr. Foster is mistaken. The one factor alone, that dark honey predominates, will always leave a demand for white. Besides, honey is not sold over the counter by the flavor as much as by looks, and no one can deny that looks dominate the world to a large extent.

In the same article Mr. Foster says: "The fact is that the average beekeeper does not know within two cents per pound what his honey is worth at his station after he has read the market reports." In this I believe he is entirely correct. At one time this spring the price advanced nearly five cents in a week's time, yet the advances were not reported by some of our weekly papers that were depended on for quotations until the second week after the raise.

\*\*\*

There have been no articles in recent issues of GLEANINGS that have appealed to me so much as that of J. L. Byer on page 755, October. His remarks on the size of hives are well worth the time of reading. After quite a long experience in the East, I cannot but feel that cellar wintering will become a thing of the past in years to come. I never had a colony die from the cold where normal conditions existed and plenty of stores were provided. One significant statement of Mr. Byer's struck me as exceptionally good: "No, it is not a question of size of hive, but of adapting radically different management to radically different hives." In this I believe that Mr. Byer is entirely correct, yet I would not for an instant advocate several different types of hives for any one beekeeper or even for one community. One style of hive for an individual beekeeper should be adhered to for the reason of economy, unless such style should be entirely antiquated in the community. There is no question but that there is a big advantage in having hives like the prevailing type in the community. A standard style is desirable, for it is almost impossible to sell or exchange to other beekeepers odd sizes or odd styles of hives. In California the neighborhood of beekeepers includes the whole state, and the prevailing style of hive is the L. ten-frame. There are many eight-frame hives, but I believe they are going out rapidly in many places. My personal choice would



be a frame slightly shorter than the L. size but deeper, with ten frames in a body slightly wider than the L. size. But as I am in a community where the standard L. size predominates and have learned to work

them to my entire satisfaction, as Mr. Byer suggests, I am satisfied, not only with the style but in the knowledge that the L. standard is perhaps the nearest perfect of any in the market today.



## REALIZING the growing needs of the beekeeping in-

dustry of this state the faculty of the Agricultural and Mechanical College of Texas is now providing courses in apiculture. These courses were adopted in 1916 and are offered this year for the first time. The courses were prepared by and will be under the personal direction of Prof. S. W. Bilsing, of the Department of Entomology. There are now many students attending the Institution who are directly interested in beekeeping at home, and there is every reason why they should be given an opportunity to further their knowledge of this industry. These courses will fill a long-felt want in this state, which stands at the head of the list of the honey-producing states.

The first course is offered to the students of the regular four-year college course. It will consist of classroom lessons supplemented by laboratory practice. This course is required of all students in the Entomology group, and is elective to all students taking the Agricultural course. Included in the course is a study of the history and development of the beekeeping industry from early times; a study of the biology and life-history of the honeybee; races and types of bees; apiary management which will include a study of honey production and marketing of the apiary products; honey flora of the state; apiary by-products; elementary queen-rearing, and a study of bee diseases. In addition to the lectures and recitations supplementary reading of the beekeeping literature will be given to enable the student to become fully acquainted with the modern problems and workers of the industry. In the practice work the student will have an opportunity to study and assemble all makes of equipment and accessories, and can thus learn the uses of all the modern beekeeping appliances. Actual apiary practice will be given, and a study will be made of some of the larger and successful apiaries of the state.

The second course is offered to the students of the two-year course in agriculture. This course will follow the general outline

## IN TEXAS

F. B. Paddock, State Entomologist

of the first course, except that the more technical phases

of the subject will be omitted. Particular attention will be given to conditions as they are related to the farm life of this state. The practice work given with this course will be very similar to that given with the first course. The students will be given an opportunity to handle the bees in the apiary, with an idea of improving conditions of beekeeping as an adjunct to the farm.

The work in both of the courses is offered during the second half of the year. This will enable the students to get that phase of the subject most needed.

The Department of Entomology is now well equipped to give these courses to the students. The apiary is at present small, but will be enlarged as the work in the courses demands. This will give the students an excellent opportunity to see what can be done with a small start. Queens of the best type, produced by Texas breeders, will be maintained in all of the colonies. This will afford the student a chance to study the different strains of the various races of bees. Honey production from various angles will be brought to the attention of the student. The equipment includes automatic honey-extractors and wax-presses.

A honey-house will be built in the near future, it being provided for by the last Legislature. Prof. Bilsing is now gathering data, and will plan the house along the most approved lines. Room will be provided in the house to accommodate the classes in apiculture.

The objects of the courses in apiculture may be briefly stated as follows: 1. To improve the beekeeping conditions of the state; 2. To encourage the keeping of bees on more farms in this state; 3. To train the students to act as investigators in apiculture, and to train students who may be qualified to serve as foul-brood inspectors.

ASSISTANT ENTOMOLOGIST IN CHARGE OF  
FOUL BROOD.

On October 1 Mr. W. E. Jackson assumed his duties as Assistant Entomologist of the Texas Experiment Station. As

such he will be in active charge on the foul-brood-eradication work in this state. Mr. Jackson comes from the Oklahoma Experiment Station, where he has been employed for two years. In addition to his excellent training Mr. Jackson has had several years of experience in practical apiculture, having operated his own apiaries, and later having had charge of the largest apiary in Oklahoma. He will devote his entire time to the foul-brood work in Texas, a part of the general plan of increasing the efficiency of the service, as provided for by the last Legislature. It is felt that much good will come from the closer contact of the State Entomologist's office with the beekeepers of the state as a result of this work. Many new counties will be organized under his direction for the fight against foul brood.

#### ORGANIZED EFFORT AGAINST BOX HIVES.

The Anderson County Beekeepers' Association is again doing things. There have been a great many box hives in the county, and the association is doing everything possible to correct this evil. Last

month the officers of the association prevailed upon fifty of these box-hive beekeepers to transfer and put new queens in their hives. The 50-queen order was placed with a queen-breeder in an adjoining county, who agreed to deliver them in person, and to introduce them without extra charge. Receiving such a large order, and from an association, the queen-breeder was more than willing to render extra service. Every one connected with this transaction was very well pleased. To indicate this the association started at once to get enough more box-hive beekeepers interested so as to be able to place another large order for queens. The result was that in a short time they were able to send off a second order, this time for 87 queens. Having given satisfaction with the first order the same queen-breeder was selected to fill the second one. On this second order he used the same care, personally introducing each queen. As a result of these efforts on the part of the county association, great strides have been made toward putting the beekeeping industry of the county on a high level.



TODAY, Oct. 11, we have just finished doing what

feeding we thought necessary. Generally speaking, the brood-nests were lighter than we anticipated earlier in the season, owing, no doubt, to the failure of buckwheat to yield nectar during the last half of August, on account of unusually cool weather at that period. Brood-rearing always slackens late in August; and with a buckwheat flow later on, much honey is stored where space was formerly occupied with brood. Before the bulk of maturing brood emerged this year the flow stopped, and naturally an empty lot of comb was left in the center of most hives.

#### FEEDING SUGAR NOT TO BE CONDEMNED.

A few of our leading lights, when referring to the feeding of sugar, frequently infer that such practice is very *shady*. Why this should be the case is a mystery to me, for in actual practice it is sometimes a necessity to feed sugar or let the bees starve. For instance, this season up at our north apiaries the crop from clover was very light and we had few perfect combs of honey to save for feeding later on, even if such an idea had been contemplated. What little white honey was on the hives was extracted at the close of the flow, and we expected

## NOTES FROM CANADA

J. L. Byer, Markham, Ont.

from appearances at that time that sufficient stores

would be gathered from fall flowers to suffice for winter. But the expected flow failed to materialize; and under such circumstances what should we do? What we did do was to feed enough sugar syrup, even if sugar did cost us \$9.40 laid down at the station near our yard, to make us feel sure that every colony was in good condition for winter. An average of 10 pounds of sugar was fed to each colony, some taking more and some less.

At the five yards near home, quite a lot of buckwheat honey was stored, altho the surplus was much less than we expected before extracting, as we found many colonies with full top stories while the super next to the brood-nest was almost empty. Having quite a lot of fine combs sealed over in supers, we saved a lot for feeding—about 600—so as to avoid buying so much sugar. An examination of brood-nests later showed that things were much the same as at our north yards—few colonies quite light, but many in need of 10 or 15 pounds of stores. We have just finished going thru those brood-nests, hunting out the light combs and substituting full combs; and after working in cool weather with *crawling* bees,



or in warmer weather with *robbing* bees, we have about decided that one such experience in putting in so many full combs in the fall of year, when the brood-nests are thus more or less disorganized, is about enough. In other words, if a colony is short ten pounds I would rather make up the deficiency with 15 pounds of thick syrup than to tear out three partly filled combs and substitute three full combs of honey. No one denies that honey is the most perfect food for bees when brood-rearing is taken into consideration; but for actual midwinter use I wonder if any beekeeper seriously entertains the idea that sugar syrup is in any way detrimental to the health of the adult bees. Personally I do not want to buy sugar except when really necessary; but at the same time I think there is a lot of nonsense being written as to the hurtful effect of sugar-feeding of bees, granting, as already intimated, that said feeding is confined to winter conditions when little brood-rearing is going on, and is, indeed, not desired.

Our north apiaries have had this deficiency of ten pounds per colony made up by feeding 15 pounds of syrup to each one. Apiaries around home have had on the average three full combs of honey placed in brood-nests after taking out a like number of partly filled combs. No matter what your attitude is on sugar-feeding, I ask any extensive beekeeper in the northern zone, especially outdoor winterers, "Which lot of bees would you prefer to take chances on?" There is no question in my mind as to which would be the best gamble; for, other conditions being equal, and with quite a few years' experience in wintering a lot of bees, we have found that the colony with a center of syrup for cold-weather consumption needs little insurance so far as wintering is concerned.

Sugar cost us about \$9.40 on the aver-

age, and buckwheat honey was sold for 13 in barrels, and 13½ in tins. At that figure I think the margin was sufficient to have covered all costs of extracting, etc., and the feeding job here at home would have been much more satisfactory, from my viewpoint at least. It is needless to say the 600 combs did not suffice for all the five yards, as a few hundred pounds of sugar was fed in addition to the combs saved out. Most of the latter were for Langstroth hives, while the majority of the jumbo hives were heavy enough without feeding.

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Bees around here are going into winter quarters very strong—too strong, in fact, if we happen to have a very mild January to start brood-rearing and cause stores to be consumed. Many colonies in 10-frame L. hives actually *fill* all the spaces between the combs on frosty mornings even if the bulk of combs are sealed solid. With such a force of bees it is easy to see what might happen with a warm January, as such conditions have existed before to my knowledge, with disastrous results in some cases.

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Honey prices are ruling high, higher, and *highest* ever—at least the highest for our time. Speaking yesterday with a Toronto wholesaler he stated that in a week or two he would be able to supply me with some California honey. Asking what the price would be, he stated that to the trade they would have to ask 20 cts. a pound in 30-pound tins. While we do not expect to buy any of it, yet we are expectantly waiting to sample that from the far West that is going to be handed out at such top-notch prices. The dealer was not sure as to the kind of honey, but said the sample was very fine, and that he could not get another car, so we do not know what to expect—sage, orange, alfalfa, or other brand not familiar to Canadian taste.



IF ever any  
federal - ex-  
tension bee-  
worker gets

## THE DIXIE BEE

Grace Allen, Nashville, Tenn.

quite seriously ill, so that it looks for a time as tho he might have to give up his work, and all his friends are worried, evidently the quickest road to prompt recovery is a mention of the illness in the Dixie Bee Department of GLEANINGS. It cured Mr. Hawkins, and now it has cured Mr. Bartholomew. May they both stay cured—we need them.

A live, ag-  
gressive state  
beekeepers' as-  
sociation is

something to be proud of. There is such a one in North Carolina. It is young, to be sure, but it is no sickly weakling with its guardians wondering if it can survive its second summer. Thriving and energetic, full of vigor and vitality, it is growing steadily. Organized in January of this year, 1917, with about forty members, it had grown by the end of August to a

membership of ninety-four, representing about six thousand colonies. That is an average increase of seven new members a month. But it did not grow of itself. Associations seldom do. The larger beekeepers were circularized, not once but many times, and the smaller or less interested ones somewhat less often. And while now there are enough prominent, public-spirited beekeepers to keep up the interest of the association, yet the campaign for new members continues. Early in September, President Sherman selected eleven interested men, advantageously located, as a special committee to put forth a special effort to get new members, because of course there are still hundreds not yet in. He sent each of the eleven a list of those in his neighborhood who might respond to personal solicitation. He sent similar lists to members outside of this special committee. So he has set the association at work for itself.

The plan of choosing the place for the annual conventions is unique. North Carolina being a long state, one meeting is to be held in the central part, the next in the east, another in the central part, the next in the west, and then the sequence repeated.

Previous to the organization in January, Prof. Sherman writes, "There was no unity, harmony, fellowship, nor acquaintance among the state beekeepers." And the beneficial results of unity, harmony, and fellowship as worked out thru organized effort of any sort are recognized quite beyond the need of argument.

Not only am I indebted to Prof. Franklin Sherman, State Entomologist, and President of the association, for the report of this work, but the beekeepers of North Carolina are likewise indebted to him for his interest and well-directed activity in behalf of the association. In all of this he has had the able co-operation of Mr. C. L. Sams, the Extension Bee Specialist. Harmony again, you see, and united effort.

#### NOTES FROM THE FAIRS.

There were not many exhibits in the apicultural department of the Tennessee State Fair this year. The crop was so light that most beekeepers were conspicuous by their absence. There were several small exhibits, but Mr. J. M. Buchanan had the only real display. We especially missed seeing the Ring Brothers, from near Franklin. There are four Ring boys, two of whom are beekeepers, while all of them were farming with their father. Two volunteered; the other two were drafted. How our hearts go out with them, and with all our fine, brave lads in khaki!

"Our hearts, our hopes, our prayers, our tears,  
Our faith triumphant o'er our fears  
Are all with them—are all with them."  
(I know Longfellow would not mind the change in the concluding pronoun.)

Mr. Bartholomew was over from Knoxville, attending the fair, and it was good to see him getting around again after being sick so long; but it was not so good to learn why he had no exhibit at the Tennessee State Fair at Nashville, when he was to have one at the Tri-State Fair at Memphis the following week. It was all a difference in the attitude of the fair managements. Nashville had taken no notice of the Extension Department, and offered no hospitality nor encouragement. Memphis, on the other hand, had invited them to come, and placed generous space at their disposal.

I have not seen Mr. Bartholomew since; but he told me that he planned to have in his booth a complete hive, a packing-case, and extracted honey in glass. Each of these three exhibits was to bear a placard, reading, respectively, "Keep bees in this." "Winter them in this." "And you'll get this."

#### NOTES FROM VIRGINIA.

Following the formation of a state association, county organization has begun in Virginia. Furthermore, *fifty-four beekeepers have agreed to try winter packing this fall.* Good for Virginia, and Mr. Kenneth Hawkins, who has recently visited that state!

\* \* \*

Dry fall weather, and getting cold early.

\* \* \*

Packed yet?

\* \* \*

#### DREAM AND PRAYER

(Written after reading the story of an Armenian refugee.)

Tale after tale I have read,  
Till my tortured dreams are dead.  
How can I dream of a God-like race,  
Tender and mighty and full of grace,  
As I used to do,  
When day after day I must read  
Some unbelievable deed,  
Some crushing, incredible thing?  
There's reason to weep but no reason to sing  
If dreams are not true.

Pray? With the heart of me dumb?  
Hope: Let no empty hopes come!  
Shaken and utterly stifled with doubt  
Of my race I thought God-like, I wander about  
Thru the wistful air,  
Till I pause by the bees, so still,  
While the sun on the low near hill  
Lays gold on the widowing trees—  
And my heart thanks God for the sun and the bees!  
And for dream! And prayer!



SINCE last issue, from several places in the

## FLORIDA SUNSHINE

E. G. Baldwin, Deland, Fla.

state, east coast and west, has come the cheering news that some honey has been and is being harvested. One man, a novice, reports 200 lbs. from half a dozen colonies, and larger apiarists say there is honey to be had now. But we need to warn beemen against extracting too closely at this time. Under the impetus of high prices and good markets many will be tempted to extract too closely. We know of one man on the east coast who extracted 2500 lbs., and will have to give it all back to the bees again! Bees need forty or fifty pounds of honey in hives at this time of year to carry them over surely to honey next spring again. Do not be governed by the northern reports of 30 lbs. per colony. That must be almost doubled for safety in Florida. Safety first, honey second.

### AVERAGING HONEY PRICES.

The latest Government bulletin, No. 7, sent out by the federal authorities from Washington, quotes from nearly a dozen honey markets of the land; and it is interesting to note the prices. We averaged these prices for amber and light extracted honey, all quotations, and find that it is 13¼ cents per lb. for extracted honey. Think of that! The average price, for all parts of our land, north and south, east and west, is over 13 cents per lb., wholesale, for all good grades of extracted honeys! To think that we should live to see the day when extracted honey would bring as much as butter used to sell for, and more than beef used to bring! We hope that Florida beemen will keep posted, and send postals to Washington for copies regularly sent out, of the Monthly Crop Report, issued by the authority of the Secretary of Agriculture, Washington, D. C. Get your name in, and the reports will be mailed you regularly. Keep posted. That is the secret of success—one of them at least.

On p. 88 of the Monthly Crop Report referred to above, we note that Florida's estimated average crop of honey up to September 1, this year, is put at 58 lbs. per colony, spring count. We do not see how this can be possible, and fear that some old or erroneous reports or estimates must have been received or used. So far as we have been able to learn, for the bulk of Florida the average amount of honey per colony will fall far below this. Only in favored localities has there been any surplus to date, (October), and that was mostly gathered after Sept. 1. Only a few reports come in to

the Government authorities from Florida; and an average, based

on the few favored localities, will always be misleading. Federal authorities complain that they can not get a good, representative, average report from our state.

### HONEY PRICES.

Beemen of Florida, remember that honey is now a scarce article, and prices are governed accordingly. Perhaps fewer apiarists of Florida take bee journals than further north. It is natural, because much of what is written for the periodicals applies mostly or only to conditions in the northern states. As a result, many beemen, even of good standing and wide experience in Florida, think it of little use to subscribe to the northern papers, just as most truck gardeners of Florida are helped not at all by the northern papers in the general rules for growing truck. Consequently, many beemen in our state do not keep abreast of the current conditions and prices, and so are prone to take the first price offered even when less than the real value. As a result, they are a prey to jobbers and speculators, and the South has always been considered a fair field for exploitation by honey-sharpers and cheap-price seekers. We are inclined to think that the usual quotation readings, such as "Cuban and southern honey," etc., that usually make a distinction in name, no matter what the grade or quality, no matter how good the honey from the South, is partly due to the effort of bidders and buyers to keep the South a field for cheap honey-buying but not necessarily for buying of *cheap* honey. We protest against the distinction that classes Cuban with Southern, especially with Florida honeys. The good honeys of Florida are as good as the best; the poor honeys of our state are as poor as the poorest. Good palmetto, tupelo, orange, and pennyroyal honeys are not to be surpassed by the finest alfalfa, sweet clover, basswood, or sage. Perhaps white clover only can surpass them, and even that does not always.

So again we say, beemen of Florida, remember to ask a good price for your product. While the quantity is slight this year, there is all the more reason why you should ask a stiff price for what you may have. All other commodities are higher in price; and as you must pay your toll of increased and increasing rates and prices for all you buy, you owe it to yourselves and your families to ask all your own product its worth.

JOHN C. Bull, secretary-treasurer of the National Beekeepers' Association, has scheduled the following dates for the state associations' annual conventions: Illinois, Nov. 14-15, at Springfield; Ohio, Nov. 23-24, at Lima; Indiana, Nov. 26-27, at Indianapolis; Michigan, Nov. 27-28, at Saginaw; Chicago and Northwestern, Nov. 30 and Dec. 1, at Chicago; Minnesota, Dec. 4-5; Iowa, Dec. 4-5; and Wisconsin, Dec. 6-7. The wisdom of the course adopted by the National Secretary is apparent because of the fact that by arranging the state meetings so that there shall be no conflict of dates, speakers of national reputation can make the entire circuit and be present at all of these state association meetings. This is good headwork and common sense.

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The exportation of queens from the United States to Australia appears to be attended with more and more risk and dissatisfaction. In a recent issue of the *New Zealand Beekeepers' Journal* an article appears under the heading, "Queens," the first paragraph of which reads as follows: "Mr. Hopkins blames the grafting method for the loss of queens imported from America. May not the loss be caused by the mailbags being bumped about more nowadays thru the quicker service, or thru the mailbags being fumigated, or thru the queens being put into the ordinary canvas mailbags instead of specially ventilated mailbags as they used to be?"

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The program of the 28th annual meeting of the Illinois State Beekeepers' Association, to be held in the sun parlor of the Leland Hotel, Nov. 14 and 15, 1917, and the night meeting of the 14th in the Leland banquet hall, is as follows: Call to order at 10 a. m. by Pres. Baxter, of Nauvoo; invocation, Rev. C. Warber, of Alhambra; address of welcome; response and president's address, by the president; reception of members; issuing of badges, recess until noon hour to visit and get acquainted. Afternoon session.—Report of A. L. Kildow, State Inspector of Apiaries; "Better Beekeeping," by Hon. N. E. France, of Plattville, Wis.; Question box—(in order all the time). Night session.—"Beekeeping—North and South," (illustrated) by Frank C. Pellett, of Atlantic, Ia. Second day—Morning—"Space between Frames" and



discussion—led by C. P. Dandant; Election of Officers for 1918; group photograph taken to go in the 1917 report; judging the ex-

hibits by ballot by non-exhibitors. Afternoon session.—Prize essays, \$5.00, \$4.00, \$3.00, \$2.00, \$1.00. Awards will be given on 150 lbs. of comb honey, and 150 lbs. of extracted honey. Handsome certificates will be issued to the winners of these awards; and upon winning either of them the third time, a valuable gold medal will be given the winner. (Explained further at meeting). Miss Stewart, of Chicago, will again report the meeting. Meeting is for women as well as men. Headquarters at Leland Hotel, where rates are \$1.25 and up, European plan. It is expected that Editor E. R. Root, of Medina, O., and Dr. E. F. Phillips, of Washington, D. C., will also be present. Jas. A. Stone is the efficient secretary of the Association and in charge of the program. His address is Springfield, Ill., Route 4.

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What we in this country may come to in the use of sugar is possibly foretold by the action of the English Ministry of Food Control now in charge of the consumption of sugar in England. There a local food office is established in every community. No sugar can be sold at retail to customers except by retailers registered by the local food-control committee; every household is entitled to obtain from the local food office a sugar-registration card, to cover all members of the household not in receipt of government rations. A portion of this card is deposited by the householder with the registered retailer selected by him. The retailer must accept sugar cards tendered to him; the retailer is required to give preference to registered customers who have deposited their cards with him; caterers and restaurants of all kinds will have their supply regulated according to the number of meals they ordinarily serve; manufacturers will have their supplies of sugar regulated in accordance with strict restrictions imposed upon their use of sugar; registered retailers will have their supplies of sugar regulated in accordance with the number of their registered customers; sugar can be obtained by caterers, manufacturers, and registered retailers only on surrender of vouchers issued by the local food office; wholesalers will have their supplies of sugar



regulated in accordance with the quantity which registered retailers, caterers, institutions, and manufacturers or other wholesalers are authorized to obtain from them. Severe penalties will be imposed for false statements and other offenses under the plan.

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The executive committee of the Ontario Beekeepers' Association has arranged to hold its annual convention at Hotel Carls-Rite, Toronto, on Tuesday, Wednesday, and Thursday, Dec. 11, 12, and 13, 1917. The following subjects and speakers have been arranged for:—Mr. B. F. Kindig, State Apiary Inspector of Michigan, has consented to be present and speak of "Some Mistakes in Management in the Bee-Yard" and of "Retailing the Honey Crop." Subjects discussed by Ontario members will be "Simple Methods of Rearing and Introducing Queens" by Jno. Newton, of Thamesford; "Mysterious Losses of Adult Bees" by James Armstrong, of Selkirk; Wm. Couse, of Streetsville, and W. A. Chrysler, Chatham; "Out-apiaries" by E. T. Bainard, of Lambeth; "The Farmer Beekeeper," by W. W. Webster, Little Britain; "Apiary Locations" by H. G. Sibbald, of Toronto; "Wintering" by J. L. Byer, of Markham; and "Beekeeping Appliances" by W. J. Craig, of Brantford. There will also be question-drawers and general discussions. On one of the convention evenings the members will have dinner together at Hotel Carls-Rite, so that the social side of the convention may not be overlooked. This is the annual gathering of the beekeepers of Ontario. All are cordially invited, including those from across the line who can make it convenient to attend. Morley Pettit, Guelph, Ont., is secretary-treasurer.

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At the Minnesota State Fair held this year, September 3-8, Mr. John Jager was superintendent of the Department of Bee Culture for this big fair, and sent out a letter to the beekeepers of Minnesota urging them to make the most of their opportunity to advance beekeeping interests at this state show. The letter is so full of the spirit that should animate officers of all beekeepers' associations that we reprint it here in the hope that it will help to inspire the whole beekeeping fraternity:

St. Paul, Minn., Aug. 3, 1917.

Greetings, Brother Beekeeper:—Our country demands food. Honey is perfect food. The National Food Training Camps are planned as a great campaign in connection with the state fairs to teach the production and conservation of foods. The Minnesota State Fair, Sept. 3 to 8, will be a great food training camp in the voluntary service of the government. Now is our time as beekeepers to make a

representative showing of honey and the beekeeping methods of our state. Every beekeeper, large or small, should be represented. Honey production should show its maximum importance along with other food products. We have reclassified Minnesota into three sections—the region of the woods, the prairie lands, and northern Minnesota. Each section has its own premium classification. This will make a fair and equitable distribution of prizes. Every beekeeper can participate in the coming exhibition, knowing that he will be given a fair and equal chance. I am enclosing our 1917 premium list. I want you to read it over—every word. Then I want you to make it a personal matter to be represented at the coming fair. Help make our exhibit of the bee industry the biggest, best, most bountiful yet held. Let us show to the world Minnesota honey as a food product. Co-operation must be our watchword if we are going to progress in beekeeping. We must work together, and the Minnesota State Fair offers a good opportunity to exhibit, to talk, to boost, to demonstrate honey as food. I am counting on your exhibit, brother beekeeper.

Yours for beekeeping,

JOHN JAGER.

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The recent organization of the beekeepers of Virginia is already bearing good fruit. The Brunswick County Beekeepers' Association, organized at Lawrenceville, Va., on Sept. 29, is one result of the state organization. This new association results from the efforts of County Agent J. B. Lewis, with the assistance given him by State Entomologist W. J. Schoene and Kenneth Hawkins, of the United States Department of Agriculture, who have been doing some excellent extension work in Virginia the past summer. The officers of the new association are: J. T. Holloway, president; W. D. Kates, vice-president; Dr. Richard Manson, secretary and treasurer. There is a decidedly enlarged interest being developed in beekeeping in Virginia as the result of the extension work and the good it has accomplished there. Prof. Schoene, secretary of the state association, is a very enthusiastic worker, and expects to see half a dozen more counties organized as a result of continued extension work in beekeeping.

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The Sioux City, Ia., *Daily Tribune* of recent date says: "The town council of Buck Grove, Ia., has ordered Dr. A. F. Bonney to remove his herd of thorobred bees outside of the corporation, holding that the said animals (or insects) are a public nuisance. Dr. Bonney has called in the services of an attorney and will resist the officers." The *Tribune* adds: "Really, it is all very complex; but were it not for Dr. Bonney not many people would know of Buck Grove, Ia."

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A letter received from J. U. B. McComack, of Gayle, Jamaica, B. W. I., on Oct. 1, says that a terrific storm visited Ja-

maica on Sept. 23, lasting half a day, and caused very great damage to the crops and destroyed much of the winter pasturage for bees. Mr. McComack says that in his locality the wind blew so low and swift that it took off the covers of many hives and blew many off their stands, the driving rain also killing many bees. He adds that very many beekeepers will likely have to do heavy feeding to keep their bees alive and in good shape for spring.

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The New Jersey Beekeepers' Association, believing that considerable benefit to the bee industry might be secured by presenting the industry practically to the people attending the New Jersey State Fair at Trenton, on Sept. 24-28, rolled up its sleeves, and by much hard work and some self-sacrifice put up a very instructive and interesting exhibit. Several observation hives, including queens, were shown, as was also an old box-hive abomination. Modern frame hives and all the appliances of up-to-date beekeeping were displayed. Foul brood and the results of wax-worms were shown and explained to hundreds of inquirers. But a colony of live bees which had built a nest of combs on the limb of a tree attracted great attention. C. H. Root brought this by hand from one of his yards near Red Bank. The exhibit was in charge of E. G. Carr, State Bee Inspector. No little credit is due Mr. Carr and President Barelay for considerable hard work in making the experiment a success. Various members of the association assisted on different days. A large amount of honey was sold under an association label. A curious fact was the small demand for comb honey. The association is aiming to become more closely affiliated with the State Agricultural Department, and will hold its annual winter meeting at the same time as does the State Department, in January, at Trenton.

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The Minnesota Beekeepers' Association holds its annual meeting December 4 and 5, at Minneapolis. An exceptionally good meeting is expected, with many Minnesota beekeepers and outsiders taking prominent parts on the program. The editor of GLEANINGS will be present. The program is in the final process of preparation and will be printed for distribution before Nov. 1. Every Minnesota beekeeper should plan to attend, and stay the two following days for the last two days of the 1917 session of the Minnesota Horticultural Society. Send to the Secretary, L. V. France, University Farm, St. Paul, Minn., for a program, if you do not receive one by Nov. 10.

M. B. Talley, bee inspector for Victoria County, Tex., writes under date of Sept. 30 that he had just lost everything except his bees and carpenter tools by fire. He adds that his part of Texas is still very dry and the bees doing little; that some have a very good supply of stores, and others are on the point of starvation. Mr. Talley does not state whether his unfortunate fire was the result of the extreme drouth and dryness or otherwise.

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The annual meeting of the Western New York Honey Producers' Association will be held at the Genesee Hotel, Buffalo, N. Y., on Tuesday and Wednesday, Nov. 13 and 14, 1917. All beekeepers are welcome and invited to be present. An interesting program has been prepared as follows: Tuesday, 10:30 A. M.—Call to order by president; secretary-treasurer's reports; "Wax-rendering," O. L. Hershisier, of Kenmore. 1 P. M. — Appointment of committees. "Beekeeping as a Business," J. L. Byer, of Markham, Ont.; "Producing Fancy Comb Honey," S. D. House, of Camillus; discussion; "Did it Pay to Recommend a Minimum Selling Price for the 1917 Honey Crop." Wednesday, 10:30 A. M.—"Rearing Good Queens," Chas. Stewart, of Johnstown; "Which Shall We Do—Keep More Bees, Keep Better Bees, or Keep Bees Better?" E. R. Root, Medina, O.; discussions and questions. 1 P. M. Election of officers; reports of committees, new business; "Preparing for a Crop of Honey," J. L. Byer; "Bee Diseases," by State Inspector; question-box; adjournment. William F. Vollmer, of Akron, N. Y., is secretary of this association.

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Honey is not included in the list of commodities falling within the classification of government - license - controlled exports. Honey may be shipped abroad as freely now as before the war exports law was passed on June 15 last.

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The M. C. Silsbee Co., whose bee-supply manufactory at Haskinville, N. Y., was burned out Sept. 1, has started a new plant at Avoca, N. Y.

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Prof. E. R. King, Cornell University, now enlisted in the United States aviation service writes that only one man connected with the college has been exempted from the draft on industrial grounds, and he is the acting farm superintendent. The war has taken several professors and



instructors and many assistants, and no courses in apiculture will be given, but the apiary will be maintained and be run for honey.

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#### DEATH OF O. O. POPPLETON.

Just as we go to press we are informed of the death of another old pioneer, Mr. O. O. Poppleton, which occurred Oct. 4 at the Soldiers' National Sanitarium, Hot Springs, South Dakota. Mr. Poppleton was one of the last of the old veterans who helped to put beekeeping on a commercial basis in the early 60's and 70's.

He enlisted as a private in 1861 in the Civil War. He was rapidly promoted until he was made regimental adjutant. He served his country faithfully for five years; and altho he received no scar, yet he was in many of the important battles. He was taken prisoner once, but was later exchanged. He began beekeeping shortly after the war in a small way and continued till he had some 150 colonies in Iowa. This was along in the 70's.

He was one of the early advocates of winter packing outdoors, when every one else was wintering indoors. He is also said to have invented the solar wax-extractor, or at least he was one of the early users of the principle of melting beeswax by means of the sun's heat.

He was one of the first to see the merits of the Long Idea hive that has been exploited in these columns at various times. It mattered not to him whether he was following orthodoxy so long as he could get results.

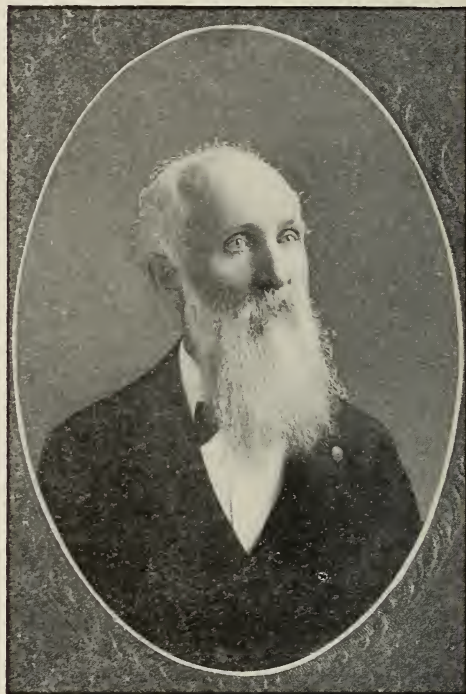
When he went to Florida he started out in beekeeping anew with the same hive. Notwithstanding he was advanced in years his business increased until he was the largest successful migratory beekeeper in the world. Others have moved whole apiaries of bees from time to time to catch new pastures; but ultimately they gave it up, either because it did not pay or because they lost interest. But Mr. Poppleton practiced migratory beekeeping among the Florida keys for ten or fifteen years. The Long Idea hive which he had adopted he claimed was peculiarly adapted to moving about. It was never top-heavy in moving, and would never be blown over by high winds when put down in place.

He moved his apiaries on a gasoline-launch up and down the famous Indian River. He would breed the bees in one locality; then, when of the proper honey-gathering strength, he would move them to palmetto and mangrove districts.

In the early days he was a voluminous

writer for the bee journals; and so far as we know his copy was always accepted, for no reader could help knowing that he was an authority. The fact that his early opinions are in exact harmony with later-day practices is convincing proof of his knowledge of the business at a time when there were so many heresies afloat.

Mr. Poppleton was of spare figure, hardly up to the medium in height, and a man who was an invalid much of the time; but the fact that he managed so many bees on the migratory plan speaks volumes for the man and for the hive that he used. He



THE LATE O. O. POPPLETON.

made it very plain that it would have been impossible for him to handle the ordinary hives on the tiering-up principle because he could not lift heavy supers; and the Long Idea hive had nothing heavier than a cover or a brood-frame to lift. When he came to move the bees he hired cheap colored help to put the hives on the boat and take them off again at the destination. In view of the fact that the merits of the long single-story brood-nests, capable of holding 25 or 30 frames, are beginning to create some interest of late it is regrettable that the chief advocate of the hive and system should have passed away at this time.

EVER since I heard that talk by Dr. Barker about worry and over-anxiety I have tried to avoid being upset by any provocation in business that might occur. Dr. Barker, in fact, almost burned into the ears of his audience the importance of putting unpleasant thoughts out of our mind by the force of will, and dwelling only on the bright side of whatever disaster may occur.

In a recent transaction, on account of my deafness partly, and partly because I neglected to do business in a businesslike way, I was robbed, or perhaps I should say it looked so to me, of something like a hundred dollars; and, no matter how many times I tried to put it out of my mind, and to think of something else, it kept coming back. I kept planning how I could protect myself and get the wrong righted. In fact, I lay awake nights brooding over it. Of course, I kept praying over it, and pleading the gracious promises in God's holy word. But in a little while back I was again, floundering in the "slough of despond." In the Christian's Secret of a Happy Life, the author, Mrs. Smith, speaks about a man who was walking along the road with a heavy sack of grain on his shoulder. A neighbor with a wagon overtook him, and asked him to get in and ride; but the poor stupid fellow, instead of dumping his bag of grain in the back end of the empty wagon, *kept it on his shoulder*. When his neighbor remonstrated the man replied:

"Why, it seems too much to ask you to carry both me and my burden. I can easily keep it on my shoulder if you will just give me the ride."

Now, I was like that poor foolish man. After I had brought my burden and dropped it at the feet of the dear Savior, I kept continually throwing it on to my poor weak shoulders again, and in that way I spoiled my peace of mind. Finally, once in the night time, when I could not sleep, I prayed again for deliverance. You see I had been planning over and over the right thing to do, and it was not very clear what course I should take in the matter, when all at once shone out in the darkness the beautiful text, "In all thy ways acknowl-



My yoke is easy, and my burden is light.—MATT. 11:29.

In all thy ways acknowledge him, and he shall direct thy paths.—PROV. 3:6.

I will both lay me down in peace, and sleep; for thou, Lord, only makest me dwell in safety.—PS. 4:8.

If any man will sue thee at the law, and take away thy coat, let him have thy cloak also.—MATT. 5:40.

edge *him* and *he* shall direct thy paths." It seemed just as if the Holy Spirit spoke out, rebuking me and cheering me with the comforting thought that, if I would only acknowledge him in all my ways—in other words, keep a clear conscience—he would direct my paths and keep me from stum-

bling. Oh blessed promise! Is it really true that the great heavenly Father will take us by the hand, or perhaps, *in a crisis*, put his hand on our shoulder, and guide or lead us in the pathway a Christian should follow?

It is now two days since the above was dictated, and I was most happily surprised to find in the morning mail the following from the head of the great establishment:

*Dear Mr. Root:*—Yours of yesterday is received, and in reply to the same we beg to advise you that we have referred your letters to our agent, with instructions to get in touch with you as soon as possible, and get the matter straightened out to your entire satisfaction.

You see, in my brooding over the matter I had got into my head the old saying that "corporations have no souls," etc. But here I have it, right from the head of the institution, that the whole jumbled-up matter should be "straightened out to my entire satisfaction." Dear reader, if you have had similar temptations, if you have at times been tempted to lose not only faith in your fellow-men, but faith in God as your heavenly Father, and if you have been tempted at times to think that it is "preposterous" to expect *him* to bother with petitions of a poor humble individual like yourself, then take courage from the little lesson I have given. Yes, I feel ashamed of my lack of faith, and I feel ashamed to think of the time I studied and worried as to how it was best to do and yet all the time I had the promise that "*he* would direct my paths."

After Dr. Barker's talk that I told you about, I was told he was to give *another* talk on *health*, or how to live to be a hundred years old. He did not give that talk here in Medina; but my youngest daughter informed me he was to give it in the city of Barberton, some 25 miles from here; but when it was just time for us to start with



the automobile my oldest grandson, who was to accompany us, was suddenly taken ill. It was too late then to make other arrangements.

The next night the doctor was to give the same talk in Massillon, some 40 miles from Medina. Just as we were ready to start, a thunderstorm came up, and I decided to go by train. The train would reach destination in time provided it were "on time." When we were near Massillon two freight cars ran off the track and thus blockaded the road. Of course, I did not know what the trouble was, and was inclined to chafe and fret and scold about the railroad companies being "always behind," etc. But I remembered Dr. Barker's vehement injunction to take things cool, look pleasant, and beware of finding fault. I told the conductor and his assistant how anxious I was to hear Dr. Barker, and then they explained the condition of things. They said they had to walk a mile and a half to reach a telephone. But things were very soon righted, altho the train came in an hour late. A stranger informed me that I could reach the Chautauqua tent by a walk of about six minutes, and then I started off. Now, Massillon is a very pretty town. In fact, it is almost a forest of shade-trees. These trees, while very grateful on a hot day, obstruct the electric lights, especially during a cloudy rainy night. I inquired the way several times, and rushed ahead in the darkness. An elderly lady overheard my inquiry, and suggested that, as some of the walks were in a bad condition, I would have to be a little careful. When I told her I was exceedingly anxious to hear as much as possible of Dr. Barker's talk, she said there was great danger of my getting but very little of it, and suggested that she would go out of her way until I could get sight of the Chautauqua tent; and when we came to a bad piece in the walk where there was little or no light, she kindly touched my arm and directed my course. When I told her who I was she said:

"Oh dear me! Is this Mr. A. I. Root? Years ago I took GLEANINGS and had your A B C book; and it is a great delight to me to meet you and give you a little help in a time like this."

Do you see, friends, where our text comes in—"He shall direct thy paths"? She was a lady of culture and intelligence; and God's method of directing the footsteps of a poor unfortunate is often thru the medium of kindly, neighborly people.

Dr. Barker's talk lasted an hour and ten minutes. I crowded right up in front and managed to hear just about the last ten

minutes. He gave it while going thru his gymnastics on a sort of cot placed before the audience. At the close of his talk he asked the audience to come up, one and all, and ask him questions. He said he was glad to direct to the best of his ability any who needed advice he could give. A great crowd clustered around him. As a matter of courtesy the men stood back and let the women folks come first. I waited as long as I felt I could stand it, for I dislike to interrupt the women, but finally I managed to push up and say:

"Doctor, I am A. I. Root. I have just managed to get in to hear the closing part of your talk."

"Why, bless your heart, Mr. Root, I am exceedingly glad to see you."

Then he turned to the crowd and said:

"I wonder if you people all know who this man is that I have by the hand."

Somebody replied, "It is the greatest bee-keeper in the state of Ohio."

Another woman in the crowd caught her up and said:

"Ohio! Why, he is the greatest authority on bees and bee culture in the *whole wide world*."

At this point I protested, saying, "No, no, friends. Don't give me more credit than I deserve. Years ago I was something of an authority; but just now the credit belongs to my sons and sons-in-law. But I want to ask the good doctor a question. Is it not possible that brisk exercise in our 'war gardens' so as to get into a profuse perspiration out in the sunshine once a day or more will answer the purpose of the gymnastics?"

The doctor replied:

"Yes, Mr. Root, it will answer perfectly if you get into a good sweat out in the open air once every day of your life. But what are you going to do when it comes winter?"

On the impulse of the moment I called out so everybody present could hear it distinctly, "Go down to Florida."

This provoked a big laugh, and so many of the crowd gathered around me to ask questions that attention was diverted from the good doctor to myself; and as he was rather tired I do not know but he was glad of it.

The longer I live, dear friends, the more I am convinced that a greater part of the troubles with our health, and I might add happiness too, comes from lack of exercise out in the open air that God intended we should enjoy like the animals; and had time permitted I should have included in my reply that we should wear just as little clothing as possible while taking this open-

air exercise, especially during hot weather. In working in the garden it is like being fettered for me to wear a starched shirt and collar, or any sort of shirt at all. In fact, when we have severely warm weather both here and in Florida, I work in the garden without any shirt—just pants and vest and underwear; and I want the underwear so the sun and air can get around my throat and lungs as much as possible. The trouble is, there comes a rush call for me over to the factory. Sometimes my coat is left where I cannot find it quickly; and Mrs. Root and my grown-up daughters protest against my going to the office and dictating to our nicely dressed stenographers while in my "garden rig." In fact, one of the "women folks" suggested I *might* be arrested and *put in jail* because I went around among respectable people only half dressed, or almost not dressed at all. Then I urged that we men have as good a right to go around with bare neck and shoulders as the women folks that are right up-to-date in fashion. Furthermore, I suggested something like this: "I would very much rather be in jail full of *life* than to be in the cemetery 'gone dead.'"

As I started away from the tent to find a hotel, a gentleman and lady said, "Mr. Root, you cannot get to a hotel handy without going over some very bad walks and pavements. We will walk along with you, and have a little chat."\* On the way I was informed that they too had once kept bees and read GLEANINGS. Before leaving them I was introduced to a son-in-law and his wife; and the son-in-law made a remark before I left, saying that, altho he was not a bee-keeper, he knew something about A. I. Root and his manner of doing business. Years ago he was setting up an ensilage-cutter near our place. By some mishap a hole had to be drilled in a very difficult part of the machine. He did not succeed in getting around until after the work was stopped for the day; but without expecting it he said we started up the engine, drilled the hole, got him out of his trouble, and charged him only—what do you think? He said we refused to make any charge at all, say-

\* As the kind gentleman placed his hand on my shoulder while we passed under the dense shade-tree, I thought again of that wonderful promise, "He shall direct thy paths." As he bade me good-night and assured me it had been a pleasure to be of some little assistance he said, "You tell the people at the hotel that Mr. Harrison sent you there."

Just one more thing that I came pretty near forgetting. After the big laugh at my advice about going down to Florida, Dr. Barker said he was in hearty accord with my plan of "gymnastics," and that starting perspiration one or more times every day, out in the open air, would be a splendid help toward living to be a *hundred years old*.

ing we did it just for accommodation and to help a man out of a tight place. Here again was the fulfillment of the promise, "he shall direct thy paths."

Now, altho these troubles were a disappointment to me in many ways it turned out to be one of the pleasantest trips I ever made. I became more intimately acquainted with the railroad men than I ever had been before. I also met a very nice lot of people, and was enabled to offer quite a few suggestions as the result of my experience: and I began wondering if we old men do not sometimes make a mistake in thinking we have got to be only a "back number," and that nobody cares to be bothered with anything we can say or do. When I got off the train, both the conductor and his assistant shook hands and hoped they could serve me better the next time opportunity offered.

I close this Home paper, dear reader, with the wish that one little text, "In all thy ways acknowledge him, and he shall direct thy paths," will prove to be as much of a beacon-light to your footsteps as it has been to mine.

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Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you; for every one that asketh receiveth; and he that seeketh findeth; and to him that knocketh it shall be opened.—MATT. 7:7,8.

#### "HARNESSING" THE WIND.

Praise God, from whom all blessings—"blow."

GLEANINGS was the first magazine, and perhaps the first periodical, to announce to the world the advent of a machine that would fly with wings up in the air, and come back to its starting-place. In other words, GLEANINGS first announced to the world that the navigation of the ethereal blue was possible. Well, it is our great pleasure to tell you today that man has succeeded in traveling over the surface of the earth with almost incredible speed without the aid of any gasoline, gas, or coal. Yes, I know it has been done before, after a fashion. Several years ago, when visiting friend F. A. Salisbury, in Syracuse, N. Y., he took me around in his electric automobile, and told me that it was moved by power obtained from Niagara Falls, about 150 miles away. This was a great achievement, I grant you: and if every one of the dear readers of this journal had a cataract like that of Niagara Falls in *his back yard* or *garden*, it could be compared to what I am going to tell you, for the winds—yes, even the light breezes that blow almost every day over our heads—have finally been "harnessed up," as I told you on page 811



of our issue for September, to do our bidding.

Let us go back a little. Several weeks ago somebody asked in the Question Department of the *Scientific American* if windmills had ever been made to furnish current for an electric lighting-outfit. The editor replied that it had been done several years ago, and referred the querist to their journal for September 16, 1912. I at once sent for that issue, and read over and over the article entitled "Farm Electric Lighting by Wind Power. A complete lighting plant installed for \$250." It was not until I read it a second and third time, however, that I noticed what I have put in italics in the following from the *Scientific American*:

*The economy of such a piece of apparatus will be understood when I state that, besides running the electric dynamo for which it was primarily installed, it takes its turn at operating a drill-press, grindstone, corn-sheller, beehive-saw, washing-machine, grain-elevator, and a feed-grinder.*

I read it aloud, and announced to the younger Roots gathered about me that if this man had a "beehive-saw" he certainly was or had been a beekeeper; and wherever in my travels I find a man who has ever taken and read GLEANINGS or the A B C book, I almost invariably find him and his place to be an "open sesame," at least to your humble servant. So I promptly forwarded him a letter, and below is his answer to it:

#### THE ELECTRIC FARM

UTILIZES THE WIND FOR ELECTRIC LIGHT AND POWER  
J. F. FORREST, PROPRIETOR.

*Dear Friend:*—I feel that I am quite well acquainted with you, as I was a subscriber of GLEANINGS IN BEE CULTURE for a short time, and also have your A B C of Bee Culture. We have had some supplies from you. This was quite a number of years ago. I still keep bees, but they are sadly neglected.

I am still at work on my electrical outfit, and I shall be delighted to have you come and look things over. It is much better to see things in operation, and be prepared to spend a day or two, so we can go over every part in detail. I enclose you a clipping.

We live two miles south of Poynette, 25 miles north of Madison, and 12 miles south of Portage, on the Madison and Portage division of the C., M. & St. Paul R. R. If you can let us know what train you will be on we will meet you at the depot. I am sure we shall enjoy your visit very much, and I believe you will consider the time well spent.

Poynette, Wis., Sept. 23.

J. F. FORREST.

With the above letter he inclosed a clipping from the *Iowa Homestead*; and this clipping, after enumerating the different uses that Mr. Forrest makes of the electricity generated by wind power, reads as follows:

None is more useful or unique than the duty of charging the Forrest family automobile, enabling the owner to run the car an average of about twenty-three miles without recharging.

It was the part about the automobile that started me off in such a hurry.

Well, this morning, September 28, I have just returned from a visit to Poynette, Wis.; and I can say, as did the queen of Sheba, "Behold, the half was not told me." First, there was an electric automobile that would hold comfortably four or five persons. Second, it climbed with three people up about the highest and steepest hills in Wisconsin. Third, the morning on which I made the trip was after quite a little rain the night before, and the roads were more or less slippery. Fourth, and most wonderful of all, *Mrs. Forrest* ran the machine while her husband and I looked on. Mr. Forrest explained by saying that she ran it rather more than he did, and he thought that perhaps she did it a little more successfully than he did. Now, Mrs. Forrest is just a plain farmer's wife—that is, to all appearances; but when you come to know her better I am sure you would be reminded of what friend Collingwood said on page 725, September; and you might think of what I said too, in that Home paper some time ago where I had for my text, "Her price is far above rubies." While I was in their pretty and comfortable home looking over various inventions for making electricity help the busy mother, his sister brought me something that convinced me that genius seemed to run in that whole family away off on those Wisconsin hills, for *she* was not only skillful in the home, skillful in running an electric automobile over slippery roads and up long steep hills but she was also a poet and *artist* of wonderful and ingenious skill. Read the poem at the end of this Home paper and see if you do not agree with me.

Now listen while I try to tell you what friend Forrest has done in the way of harnessing the wind. Perhaps you have already gathered that his locality on one of the tallest hills, perhaps, in Wisconsin, is unusually favorable for wind power. His first windmill was only 12 feet in diameter, and only a little higher up than the roof of his barn; and this 12-foot mill successfully charged the batteries of a forty-cell storage battery, altho I believe he had to charge 24 cells at a time. Of course, 23 miles is not a very big run for an electric automobile; but when you take into account the Wisconsin hills, some of them pretty rough and gravelly at that, you may think it is a pretty big feat after all.\* Mrs. Forrest said she had already made 23 miles on one charge, and the batteries would probably have held

\* To get back to that home, away up on the hills, of course takes quite a little "juice," and this "home stretch" must be taken into consideration on every trip.

out for quite a number of miles more, especially on level ground. It is not advisable to exhaust the batteries down to the last half-mile; and it is important, also, when you start to charge it, to see that it is filled *clear up*. Friend Forrest is a crank on storage batteries as well as on windmills, and he and I had some very interesting experiences to relate, as you may guess, in regard to storage batteries.

In the home they have a suction vacuum carpet-cleaner, an electric toaster, warming-apparatus, electric fans, various kinds of lamps; and a young son, who is a veritable "chip off the old block," until very recently had a pretty wireless outfit; but "Uncle Samuel" suggested (?) that he take it down.

When I first got up by the barn I found they were busy preparing to put up a silo to hold their big crop of corn. As the location is a natural gravel hill, in order to save going up so high they had dug down perhaps twelve or fifteen feet. A carrier, such as is used for moving manure from stables, was let down into this pit, and I should say nearly half a wagonload of stones and gravel was shoveled into it. When I saw the rope hitched on to such a heavy load I said, "Why, friend Forrest, you do not expect that storage battery to handle all of those awful big stones, do you?"

"I think it will handle it. We will see."

He "pressed the button," and up mounted the cargo of sand, gravel, and stones, and off it shot to a wagon a little distance away, dumped itself, and then came back to the starting-place, all the work of the sixteen-foot windmill.

There are machines galore all over his buildings, ready to start up in an instant at any time, day or night. There is quite a nice engine-lathe, feed-grinders, corn-sheller, grain-elevator, churn, washing-machine, emery wheel, sheep-shearing machine, a buzz-saw to cut firewood which will cut off logs, I think, six or eight inches thru, even of hard oak. In fact, I saw different machines for different purposes all ready harnessed up for instant use all around the various buildings and even outdoors.

After we had sufficiently discussed machinery we were ready to look at something else for a change, and so I looked over his beautiful farm—eight acres of beans, for instance. But the beans up on that hillside had been injured more or less by frost two weeks before then. Sweet clover grew on both sides of the road as high as one could reach; but the people around there somehow have as yet not gotten hold of it. A beautiful clean strawberry-bed had luscious

berries (of the fall-bearing kind) just as full of green fruit as could be, and some of it just ripening. A plum-orchard near by was a delight to me in more ways than one. They were just at their very best. There were so many plums on the ground I could hardly find a place to set my foot, and many busy hands were gathering up the fruit. Mrs. Forrest said they got only \$1.00 a bushel in Poynette; but she carried some of them (I suppose in that beautiful electric auto) to a larger town, some distance away, and obtained \$2.50 a bushel for them instead of only \$1.00. These plums I should pronounce some of the best selection from the native wild stock; and the great beauty of this variety is that they *never winter-kill*, and are never hurt by the frost. The trees are loaded down more or less every season, and never a failure. I think there must be toward half an acre in the orchard, and more luscious plums on the trees and on the ground than I ever saw before. Some way I had got it into my head that plums did not agree with me; but I ate so many just before dinner that I really felt worried about the consequences and yet they did not hurt me a bit, and I never felt better in my life. Perhaps the native wild plums would not do as well everywhere else as they do on those great Wisconsin hills.

Now a word about windmill power and storage batteries. The objection has always been to wind power, as you know, that it is very irregular; but when you once get this irregular force bottled up in a storage battery, then you have the most efficient and steady power in the world. In my boyhood days I had visions of having a windmill pump water into a great elevated tank, and then use the water to run little water motors with power; but such a tank (aside from the expense) would never do for running automobiles, because it could not be carried around. The storage battery can carry itself and have power enough to run a carful of passengers fifty or even a hundred miles or more. I asked friend Forrest how much work could be done without the storage battery. He said he could run his wife's flatiron, and it would do fairly well for grinding grain, with a mill so arranged that it would not choke up when the wind slackened, etc. The older readers of GLEANINGS will remember that I ground grain with a windmill forty years ago, when GLEANINGS was printed on a press that was moved by wind power. Friend Forrest's arrangement is something like this: When he is charging a storage battery, for instance, when the mill comes to a certain speed it makes electric contact so as to send a charge



into the batteries. If the wind slackens again so that the charge in the battery might run out backward, this connection, or switch, as it is called, cuts off the current automatically. If in a gale the mill should go too fast the current is interrupted in a like manner, and the momentum of the windmill swings it out of the wind. Let us put it this way for illustration: When the mill gets up to the proper speed the current passes thru the batteries, or by the batteries, and does the work. When the speed or power gets to be *more* than is needed for the work it is doing, the surplus pils up, as it were, in the storage battery. In a like manner, when the wind goes down so there is not speed enough to do the work, the battery turns in and *assists* the windmill.

I think I forgot to mention that, not very long ago, Mr. Forrest supplemented his first 12-foot mill by buying an up-to-date 16-foot mill to put on the highest elevation on his farm of about a hundred acres. This mill is quite a little distance from his house, barns, etc. But that does not matter, because a wire brings the power. In fact, a great part of his machines are equipped with a little motor so he can have the power to use in any place he pleases. Indeed, he can move his machines about, wherever they happen to be needed; and just by running to it a little slender wire he gets currents of one or more horse power.

Friend Forrest is, I think, a little over fifty years of age; but he is just as full of enthusiasm in keeping pace with electrical science as he ever was; and not only keeping pace, but, if I am correct, he is one of the forerunners in electrical science, especially in the matter of harnessing the winds. He and his good wife are both of Scotch ancestry; and as some of you may not readily "catch on" to the Scottish expression, we have taken the liberty to add a little by way of a sort of preface to the poem, as follows:

BOOK OF POEMS BY ELIZABETH FORREST AXON, A  
SISTER OF J. F. FORREST.

The following is copied from a little souvenir book of poems which the good wife gave her husband as a Christmas present. In this book containing the poem, on each page is a beautiful picture painted in water-colors by Mrs. Axon, illustrating the windmill, home, and various things referred to in the poem. I wanted to have it copied in half-tone; but Huber says that, unfortunately, we cannot copy colors except at great expense. The name "Keek-afar" probably refers to the beautiful views for miles in every direction from their home on the great hills. I think friend Forrest said that on a clear day they could get glimpses of a town some twenty miles away. Verse 1 has reference to a sheep-shearing machine that is operated by the storage batteries. Verse 5 refers to a gale that once blew half the roof off his barn; and this catastrophe may have suggested "harnessing" this wonderful force so as to make it do his bidding. Verse 9 refers to the lamps in his barnyard, poultryhouse, and all over the premises, which can be turned on

or off by means of a switchboard on the porch; verse 10 to the electric lights that cannot be blown out by the wind; verse 11 to the electric vacuum sweeper; verse 12 to the electric fans or blowers in the dining-room and elsewhere; verse 13 to the mill for grinding grain, that makes his "Macaroni breakfast food;" verse 14 to the electric automobile propelled by wind power; verse 15 once more to the sheep-shearing machine. Verse 16 refers to the periods, few and far between, when there is not wind enough blowing over the hills to move the windmill.

To  
James Francis Forrest,  
owner of the  
"Electric Farm,"  
and heir to "Keek-afar,"  
this poem is  
lovingly inscribed.  
Christmas, 1916.

#### THE TEMPERED WIND.

Ye'll hae h'ard o' the Laird o' Keek-afar,  
The Laird to the manor born.  
Wha's tempered th' win's o' Heaven  
An' the helpless lamb has shorn.

A'weel; he dwells aboon us a',  
An' farther sees than maist o' men;  
But not wi' sight o' orner kind—  
His vision lies beyond the ken.

Roun' Keek-afar the win's cauld blast  
Had lang been felt fu' sore;  
For up the valley's wide clear sweep  
In freedom wild it tore.

It warst'd wi' the clinging vines,  
It rocked the very hoose;  
It dad't here an' dunt't there  
Till e'en the swine were crouse.

Ae summer day, he'll mind it weel,  
The wind on rampage gaed,  
An' jes to gie our Laird a hunch  
It lifts the roof aboon his head.

The shog—it gars his hair rise up—  
It surely is adept;  
Wha daurs deny that very thing  
Let in the great concept?

The aged tree flings out its arms  
To whup the gale its lane;  
But, och! the lad that lo'es yer shade  
Will sneed it w' a vane.

The wildest blast at mirkest hour  
But fans the ingine spark;  
An' noo our Laird diverts the win's  
An' gars them dae his work.

An' noo, jist gang to Keek-afar  
An' see that selfsame Laird  
Gang pushin' buttons here an' there,  
His muscles a' impaired.

An' lights flash out like will-o-wisps,  
Their truth ye canna doot;  
The win's can blaw like ony wraith—  
It canna blaw them oot.

The fashous gale that raised the stour,  
I' faith; twad gar ye greet;  
Is fleech'd an' sairly wantin' noo—  
It licks the dust frae 'neath his feet.

The selfsame breeze that cooled him syne,  
Is bottled erst while noo;  
An' when himself sits doon to eat  
He gars Boreas fan his broo.

An' syne it filled his mou' wi' dirt,  
But noo he scarcely minds;  
But smacks his lips on guid auld broe  
That's made o' meal Zephyrus grinds.

He does na use Shank's naiges noo,  
The road he seldom tak's,  
But rides abroad in horseless chaise,  
Propelled by juice Aurora mak's.

An' noo the bleat o' puir wee lambs  
Is borne upon the breeze;  
Their mither's, feckless, in the bield—  
The temper'd win' has ta'en her fleece.

But while's auld Zeus is in the dumps,  
Then dour an' sullen are the skies;  
The only wind at Keek-afar  
Is jist our Laird's deep sighs.

—Elizabeth Forrest Axon.

As I write the great drawback to this whole business of harnessing the wind is the expense of the storage batteries. Friend Forrest has three of them. He has become so familiar with them that he remodels them, and I think he has built a few himself. Of course the advance in the price of metals has something to do with it; but I am inclined to think at the present time that manufacturers are charging rather more than the circumstances warrant. The battery alone for running such an automobile as I use costs new, for 24 cells, about \$260, or a little more than \$10 per cell; but a new battery, with ordinary care, will do work for ten or twelve years. Some of them are doing still better. When I suggested to friend Forrest that he might do light work without running his current thru his batteries, he replied that past experience seemed to indicate that a battery would last longer, and keep in better repair, where it is used almost every day, than where it is permitted to stand a long while idle; and that sort of philosophy seems to apply pretty well to old men when they get to be, like myself, close to 80 years old. They live longer, and do more good, where they "keep in the harness" every day. A good

friend at one of our beekeeping conventions down in Florida said last winter something like this: "Lots of people die because it does not seem to be of any use for them to live any longer."

Some of you may ask what the text at the head of this Home paper has to do with the talk I have just given you. Well, if you will just think of it I believe you will see where it comes in. These wonderful developments—steam, electricity, automobiles, flying-machines, harnessing Niagara, etc., came about because some good man (or woman) followed the injunction contained in that beautiful text and promise—"seek, and ye shall find;" and our good friend Forrest has for years past been seeking indefatigably, and now he has received his reward. He is so well up on electricity and electric generators and motors that on questions where our college professors seem to be in deep water he is almost at home. Last of all, and best of all, he is a good *Methodist*. God bless the Methodists wherever they may be.

Now, good friends, when the unused wind shall finally turn out like the much-abused sweet clover that grows along the roadside, and shall begin to do the work that has heretofore been done by wood, coal, gasoline, and gas, then remember that your old friend A. I. Root said in this Home paper, "I told you so."



## HIGH - PRESSURE GARDENING

THE CHAYOTE OR "BABY-TOES;" SOMETHING MORE ABOUT IT AND OTHER THINGS.

As I sat down this morning to my monthly enjoyment of Our Homes the first thing that caught my attention was an illustration of the "chayote." I recognized the fruit (or, rather, vegetable) in a minute; but as I had never heard it called by such a name, naturally I read the article very attentively. I have been familiar with this vegetable since early childhood. It grew well in Pointe Coupe Parish, La., where I spent many of my girlhood days. It is what the southern catalogs list as "*Scytos* or *Sechium edulis*," and what we Louisiana folks call "mirliton" or vegetable pear. As children we could not twist our little tongues over that French mirliton, so we called them "millie toes;" and a dear little sister, now gone before, one day wanted a second helping, and, having forgotten the toe part, remembered it was only something about the body, and asked mother for some more "millie fingers," which caused a roar of laughter from us larger children. Our home was one of those dear places where children were not relegated to the kitchen or second table; but even the last baby in its high chair, at mother's side, ate with its elders. We were taught to keep quiet and to behave at the table, and that was all there was to it.

Now, Mr. Root, you have "one over" Mrs. Root, as the mirliton is one of the most delicious vegetables when rightly cooked. Here is what one of my catalogs says:

"This fruit forms a delightful dish, finer in flavor than either eggplant, squash, or pumpkin."

Speaking of pumpkin, we Southerners in many places use the young pumpkins and kershaws as squash, cooking them the same way. This is a "hard times" hint, and here is another: Beet leaves, radish leaves, and even lettuce, all make fine greens when young and tender. It would really take an expert to tell beet greens from spinach, if cooked the same way.

Now, GLEANINGS, I want to thank and compliment you on your beautiful volume the A B C and X Y Z of Bee Culture, which came to us June 5. I told my better half (J. H. Wheeler) that he should have been as prompt to let you know he received it as he was to keep after you; but he is always very busy. What time he has from his other work he puts in with the bees. I can't help him with them any more than to bottle the honey and melt the wax, as the bees "do me up" dreadfully.

I was quite interested in the Lewis Publishing Co. My husband and I were "charter subscribers" in the *Woman's National Daily* published by him some ten years ago. We were so taken with him



that if it had not been we were quite poor at the time he would have had a *hundred* instead of *one* dollar out of us.

Well, I can hear Mr. Root say, "When is that woman going to stop?" so I will "ring off," with best wishes for GLEANINGS.

St. Joseph, La., Aug. 7. MRS. A. A. WHEELER.

My good friend, I am delighted to get further particulars in regard to this wonderful vegetable or fruit. But you do not say a word about the enormous crops it bears in one year, away up into the hundreds or even thousands. The one I pictured is now growing by the poultry-fence; and it is my delight to see it reach up its tendrils and grab hold of the trellis, and then go thru with that unique corkscrew act to pull the vines up higher. It is making such rapid growth that I often note progress in even one or two hours. Of course, it will die when frost comes. Does it stand over winter in the locality you mention? You need not worry about being "rung off" so long as you give us valuable facts, especially in the line of reducing "the high cost of living," my good friend.

#### SWEET CLOVER, AUTOMOBILES, HIGH COST OF LIVING, AND "GOATS."

Mr. A. I. Root:—I am enclosing a picture of my sweet clover in a young walnut orchard. It is just coming into bloom the second year. It was a mistake to let it get so large before cutting for hay, the stock of all kinds eat it. The horses shown have had no other feed all summer, not even any grain when working; and they have done all the work of the ranch, which consists of 20 acres under a high state of cultivation. As I said, it was a mistake to let it get so high and coarse; for, by cutting earlier I could have secured a better grade of hay, and there would have been another cutting. The plants are now all dead. I also grow sweet clover in the orange-orchard as a fertilizer. A ten-foot strip is planted in the tree rows. This is about the width of the trees, branches and all. Lima beans are grown in the middle, six rows between two rows of trees. Of course the clover in tree rows must be cut with a scythe; but it makes an enormous amount of green fertilizer.

As you are interested in milch goats I will mention that they are growing in popularity in this state. Out here almost every family owns an auto, and just as many take a regular summer vacation. Those of us who are so old-fashioned as to keep a cow have to leave the cow in charge of some one, generally a neighbor, and do without milk on the camping trip, or use milk from a tin can of which one is as bad as the other, in my estimation; but not so with the owner of a *goat*. The goat is simply placed on the running-board of the car; and when you arrive at camp there you are, fresh milk for baby, the same as at home.

Fillmore, Cal., Aug. 27. WM. C. GATHRIGHT.

On page 871 of our September issue Ernest intimated that sweet clover might ultimately take the place of alfalfa. When I remembered that in California alfalfa often takes the place entirely of grain for work horses, I thought he put it a little strongly; but in the above letter friend

Gathright tells us that he kept that big team in good order on *sweet clover*—no grain at all. Has anybody else succeeded in accomplishing this? Well, the one fact given above stamps this latter as something of great value; but taking a goat along on the running-board of an automobile is indeed a novel suggestion. I shouldn't wonder, too, if it were one of great value. If I understand it, goats will get right down to business anywhere, and find something to eat. I would have a goat on my wild five acres down in Florida if it were not for the matter of having to care for them when I am gone in the summer time. And, by the way, if all other stock thrives on sweet clover, how about sweet clover for *goats*? If it is not just now found everywhere along the highways and in the fence-corners, it will be very soon. It is my impression a goat would hunt it up and make use of it about as quickly as any other farm stock. Of course, a cow *could* be taken along on a camping trip; and this brings up the question, what is the probable weight of a goat, say one that would give milk enough for the baby and perhaps some other small children? Many thanks for your suggestion, friend G.

#### GOATS AND GOATS' MILK IN SWITZERLAND AND ALSO IN ARGENTINA.

Mr. Root:—As an attentive reader of your writings I noted with satisfaction that you are also interested in goats and goats' milk. In my native country, Switzerland (where the Toggenburg and Saanen goats were originated), this animal plays an important part in those mountainous regions where the pastures are too steep for cattle. In some Alpine villages the goat-herd, usually a small boy, has charge of the whole flock of the community; and early in the morning, by a horn signal, he announces the departure for the distant pastures, and then the goats from every house gather at the usual meeting-place. At sundown they come back again to the meeting-place, from whence each goat finds alone the house of her master, usually with a well-filled udder—sometimes to the extent that some milk is lost on the way drop by drop. For the less mountainous part of the country, where free range is not close at hand, the goat is kept as a stabled animal all the year round—the cow of the poor.

While modern hygiene condemns the use of uncooked cow's milk, the same authorities recommend the fresh goat's milk as wholesome.

In my native city, during the summer months small herds of goats are brought to public gardens and pleasure grounds, where an attractive open stable is provided for them, and a few tables in the open for the guests, mostly children, who get a good-sized glass of fresh rich milk for 10 centimes (2 cents)—at least it was so formerly. Whether the same moderate price can now be maintained is another question, as now the care for sustenance is quite a problem for our people, for the cultivable land amounts to only about one-fourth to one-third of the whole area, the remainder being occupied by mountains, glaciers, lakes, forests, etc., which, altho offering a beautiful scenery, are of little help now. The imports of foodstuffs and raw materials for the

well-developed industry constantly meet difficulties, as everything has to pass thru belligerent country.

Speaking of goats, I may say that they are also rather numerous in this section of Argentina (Sierras of Cordoba)—a semi-arid region somewhat similar to Southern California. This summer we had an unprecedented drouth of eight and one-half months, and cattle have died by the hundreds, but only in this section—at least in the cases where the owners neglected to bring their animals to the high sierra, where there is always some grass. But under the same condition, where no cow could exist, the goat has kept the field, and not one goat was lost on account of the drouth. This native race has thus given an excellent proof of its resistance and its adaptability to adverse conditions.

ERNESTO TSCHUDIN.

Luyaba, Sierras de Cordoba, Argentina, Feb. 6.

#### GOATS' MILK.

Mr. A. I. Root:—In your talk about goats' milk

in GLEANINGS for December 1, 1916, page 1138, you quote from the editor, A. C. Gage, of *Angora Journal*. He says that you could not tell the difference from cows' milk and goats' milk out of different glasses but by the richness of the latter. You might tell Gage he should never start to judge honey. If his taste is so poor he would make a poor judge. Many years ago we bought a goat to go among a dairy of cows, as people said it would stop abortion in cows, or, as it was called, "picking calf." The goat had no effect. I had a sister, not strong, and she was advised to drink goats' milk. At my breakfast they used to put some goats' milk among the cows' milk I had for my porridge. They never let on to me, and watched to see the effect. Never once did they manage to cheat me without my knowing the difference, and I do not consider that I am an expert taster; still, I could pick out that peculiar taste. JAMES SMITH.

Drungans, New Abbey, by Dumfries, Scotland, Feb. 23.



## TEMPERANCE

CARLOADS OF BEER OR CARLOADS OF COAL—  
WHICH SHALL HAVE THE RIGHT OF WAY?

May the Lord be praised that we have at least *one* woman (Miss Jeannette Rankin) in our national congress; and may he be praised still more for a woman of such ability, and one who is not afraid to call things by their right name. From the *Chicago Herald* we learn that she is making a protest because cars for the transportation of beer (just while there is a car shortage) are given the right of way in place of cars for coal or almost anything else. During the year 1916 368,000 carloads of beer was consumed; and she tells us that 10 per cent of the available cars in the United States are used for moving liquor. Of course, spirituous liquors have been knocked out; but *ten times* as many cars are used for moving beer on account of its greater bulk.

Now, then, good people of the United States, it rests on our shoulders during the coming election to decide which is of the most importance—the transportation of coal or of beer. This good woman also holds up before our eyes the way in which congress has been urging us to save every crumb of bread and every bit of meat, butter, fat, etc.

KENTUCKY—SOMETHING IN HER DEFENSE.

Mr. A. I. Root:—Apropos to your clipping in October GLEANINGS, p. 806, "Whisky-soaked Kentucky, etc.," allow me to correct both yourself and the *American Issue*. In the first place, let me say I am a Yankee of the Yankees, and proud of it, having been born on Bunker Hill and lived a part of my life there. Kentucky has been the state of my adoption for half of my life, and I am proud of that also. I love her people and the state, altho raised in the North and having had a father

whom we called "the last of the Puritans." You will readily see that I have had experience enough to see both sides of the question. Possibly neither you nor the *American Issue* is aware that Kentucky has 108 absolutely dry counties out of a total of 119. This compares favorably with Ohio, the state where the *American Issue* is published. Let it be known that, altho Kentucky has made lots of whisky, the great bulk of it is *used in the North*. There is more illiteracy in the South than in the North (Kentucky included), not because of whisky, but of the different systems of education that in the past have obtained here. When I first came here we had no public-school system worthy of the name. Any one who could make a living at all had money enough to send his children to a private school, and they did it. In later years more attention has been paid to public schools, and most of them will compare favorably with those in the North for towns of equal size; and the private schools have languished in consequence, which is proper. The most of the illiteracy in this state is among the mountain counties and the colored population. We have all over the state so-called "moonlight" schools where any one so disposed can obtain, free of charge, the rudiments of an education. "You can lead a horse to water, but you can't make him drink," holds good both in the North and South. A colored man worked for me over twenty years, and in all that time I could not induce him to come to my house at night and learn to read and write. We are a very good people here, altho "whisky-soaked." Pastors from other states come here and state that central Kentucky has a larger proportion of church members and attendants than any locality they ever heard of. Our population, outside of the three largest cities, is almost pure English. In this county of about 15,000 population I can safely say there are not 100 of foreign birth. Don't kick poor old Kentucky around. *Quit drinking our whisky*. Honey crop this year, one-tenth of last.

Harrodsburg, Ky., Oct. 9.

W. H. REED.

My good friend, I confess I felt worried when I made that clipping from the *American Issue*; but I thought it might have a good effect in calling forth a correction such as you have just made. I rejoice to know that Kentucky has 108 dry counties out of



119; and may God grant that when this comes before you in print there will be a still better state of affairs. If we here in the North have not already *entirely* stopped the drinking of "Kentucky whisky," we are well on the way to it.

#### TEMPERANCE FROM ALL OVER THE WORLD.

First we have the following from one of our readers in Vancouver, B. C.:

*Dear Sir:*—I am enclosing herewith a clipping from a local paper announcing the advent of prohibition into this far-away province. It might be interesting to you to know that Canada is now dry, in one continuous stretch, from the Pacific Ocean to the eastern borders of Ontario.

WELFRED W. SMITH.

Vancouver, B. C., Oct. 1, 1917.

Accompanying the above was a full page from the *Vancouver World*, from which we clip the following:

#### B. C. PROHIBITION ACT BECOMES EFFECTIVE MONDAY

ABOLITION OF THE BAR A RESULT OF A LONG FIGHT.

On Monday next, October 1, the bar will disappear from British Columbia, by the will of the people of the province.

TWO MILLION BUSHELS OF GRAIN ARE SAVED.

Billy Sunday visited the province and addressed probably two of the largest meetings ever held in British Columbia, at Victoria and Vancouver. At the Vancouver meeting over 11,000 people filled the arena.

We clip the following from the *Florida Grower*:

#### ONLY TWELVE WET VOTES.

At the special election held on the 18th to determine whether the new county of Flagler should go "wet" or "dry" the "drys" carried the election by an overwhelming majority, there being but twelve votes for the sale of intoxicating liquors in the entire county.

The following is clipped from the *American Issue*:

#### FLORIDA VOTERS TO VOTE ON STATE-WIDE PROHIBITION;

BOTH HOUSES OF LEGISLATURE PASS BILL SUBMITTING PROHIBITION LAW AT ELECTION TO BE HELD IN 1918.

MAJORITY OF 20,000 EXPECTED BY DRYS; STATE SENATE TAKES ACTION TO CUT DOWN IMPORTATION OF LIQUOR.

Florida, without doubt, will join the list of state-wide dry states as the result of a referendum vote of the people to be taken in November, 1918. This vote was taken in the Legislature on April 11. The Senate vote was 29 to 3, and the House vote 62 to 4.

We clip the following from the *Florida Times-Union*:

Key West is now bone dry.

LET THE WOMEN AND CHILDREN SCRAPE AND SAVE IN ORDER THAT THE BREWERS MAY

HAVE THE GRAIN TO MAKE BEER FOR THE "MEN FOLKS."

Our good friend Minnie J. Ellis is still alive and on the war-path, as one might readily suppose. Below are some clippings which she sends. I think they are from some

articles she has furnished to different periodicals.

Yes, be patriotic; plant your front lawn in potatoes that the brewers may have the grain. Raise your flag over the "Land of the Brewer and the Home of his Slave." God give us a stainless flag.

EAT CABBAGE; GRAIN IS NEEDED FOR BEER.

The Ohio Defense Council is issuing daily bulletins giving all sorts of advice about what to eat and what not to eat—mostly about what not to eat.

The advice about what one should eat is mostly that the people should subsist on bread crumbs, garbage, bon mots, and luxuries left over by the cats in the back yard.

They want us to eat bread crumbs so that the fat brewers can have the grain.

The real meaning of this literary junk boiled to the bone is that Americans should eat this cast-off junk in order that the obese and greasy German brewery overlords may have the grain to make beer with.

They call this sort of thing "patriotism." That is, the Germans call it patriotism. Americans who don't swear, mostly call it jackassery.

#### PROHIBITION—ONE OF THE SAD (?) RESULTS FROM IT.

The following, which we clip from the *Florida Grower*, probably comes from our friend Russell Kay, who is presiding while the regular editor, Mr. Wright, is off on a vacation. What do you think of it?

And now the booze artists have another argument against prohibition. It is pointed out that bad roads are a direct result of prohibition. A county engineer states that since the bone-dry law went into effect in his territory he had so few convicts at his command that it was impossible to keep the highways in his district in good condition. Now the question arises, Which is of most value to a community; convicts or good roads? It occurs to us that it is possible to enjoy the advantages of good roads without the necessity of employing convict labor. This argument against prohibition is as logical as if it bore the stamp "Made in Germany."

#### CIGARETTES AND "EFFICIENCY," BY ELBERT HUBBARD.

"As a close observer and employer of labor for over twenty-five years, I give you this: Never advance the pay of a cigarette-smoker; never promote him; never trust him to carry a roll to Garcia, unless you do not care for Garcia and are willing to lose the roll. Cigarette-smoking begins with an effort to be smart. It soon becomes a pleasure, a satisfaction, and serves to bridge over a moment of nervousness or embarrassment. Next it becomes a necessity of life, a fixed habit. This last stage soon evolves into a third condition, a stage of fever and unrestful, wandering mind, accompanied by loss of moral and mental control."

We clip the above from a tract sent us by Irving Keck, Bowling Green, Fla. By the way, somebody suggests that not only our United States but the nations of the earth are ruling intoxicants out of close range of the military camps while nothing is said or done about cigarettes. Just recently a lady asked the editor of one of our daily papers what she should put into a box to send to the soldiers. Among other things the editor replied something like this:

"Don't forget a generous supply of cigarettes." Did you ever? Did Elbert Hubbard make a mistake? I think that every college professor or teacher, and I should like to say every doctor as well as every minister of the gospel, would unhesitatingly say that Elbert was just right about it. Somebody said to me recently that the soldiers in the army, especially where they had not much to do, were using cigarettes to an extent unheard of heretofore.

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TROUBLE WITH THE FEET; "FREEZONE,"  
"ICE-MINT," ETC.

Some time last winter I saw a notice in a daily paper about a new remedy for corns, called "Freezone." This article pretended to be a news item from the editor of the paper; but at the bottom of the item was seen the familiar "(Advt.)." I saw at *once* that Freezone was going to be "a hit." I went right up to our Bradentown drugstore, but they were sold out *already*. So many people have trouble with their feet that there was a rush for the drugstore, particularly because the advertisement claimed that all pain and uneasiness would cease at once, and finally that in just a few days the entire corn could be "picked out, roots and all." I finally got a bottle at another drugstore. Very soon afterward there came out a similar advertisement called "Ice-mint." Here is an extract from the advertisement:

You simply apply a little on a tender, aching corn or callus, and instantly the soreness is relieved, and soon the corn or callus is so shriveled that it may be lifted out easily with the fingers—roots and all—leaving the surrounding skin in normal healthy condition.

Now for the outcome: I applied Ice-mint (to a corn that had troubled me occasionally) night and morning, just exactly according to the directions, for about three weeks. Did the corn drop out as described above? An expression much in vogue down south seems to hit it—"Nothin' doin'." The corn has not dropped out, and, in fact, it has given me more pain and trouble since I began using Ice-mint than any other corn I ever had before in my life. In the directions for use is the old well-known remedy: "Give the foot a good soaking, after three or four days, and protect the corn in some way so the shoe cannot press on it." The above treatment alone gives great help, as we all know. Freezone used by Mrs. Root gave *some* very good results; but as to picking the corn out, roots and all, with the fingers, there was no such "good luck" in our home. Now, as other people may have had an experience different from my own

and that of Mrs. Root, and as we may be only an *exception*, if wrong we will humbly beg pardon of the Ice-mint and the Freezone folks, and will give them some free advertising besides. I confess it has seemed to me all along that nobody would claim what these two advertisers do unless there were at least *some* ground for their great claim. Not only are their little advertisements in the daily papers, but I see that Ice-mint is now taking full-page advertisements in some of our monthlies.

By the way, in regard to keeping the shoe from pressing on the corn, I have made a little invention. Where the callus or corn is on the bottom of the foot, put in your shoe a cork sole with a hole cut clear thru the cork sole large enough to keep all pressure off the corn.

After the above was put in type the "boss printer" informed me that my invention is old, and that he has used a cork sole with a hole in it for years and years, which only goes to show that my "great invention" is, like the biggest part of them, old, and that "there is nothing new under the sun!" But to get back to the feet once more: I find it is very bad for a corn to have the feet get hot, and for that reason I wear, the greater part of the time, some thin cloth shoes to keep my feet cool and give them plenty of air. Was it Abraham Lincoln who said, "the feet need to *breathe*?" While the feet should be kept comfortably warm, at the same time they should not be allowed to become hot and feverish by too much covering—especially covering like rubber, (and leather also, to some extent,) that is impervious to air. Freezone costs 35c; Ice-mint, 50c.

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## TRADE NOTES

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### SPECIAL OFFER ON ONE-POUND ROUND JARS.



We have available at Des Moines, Chicago, and St. Paul a surplus stock of glass jars as shown which will hold 15 ounces each of ripe honey. These are as handsome a jar as we have ever sold; and on today's market, with the extreme difficulty of getting such ware from the factories, are easily worth much more than the price we are placing on them for a special sale this month. We prefer to reduce the stock to make room for other goods, and offer for this month, while stock lasts, 6 cases for \$6.00; 30 cases for \$23.50; 100 cases, \$90.00. We are particularly desirous of disposing of the stock in Des Moines, where we are closing up our branch and arranging with other parties to handle our goods at that point. Send your orders direct to The A. I. Root Co., Des Moines, Chicago, or St. Paul, whichever point is most convenient. Send remittance with your order, and do it now while stock is available at such bargain prices.

The A. I. Root Co., Medina, O.



## Classified Advertisements

Notices will be inserted in these classified columns for 25 cts. per line. Advertisements intended for the department cannot be less than two lines, and you must say you want your advertisement in the classified columns or we will not be responsible for errors.

## HONEY AND WAX FOR SALE

Good thick extracted honey for sale in 60-lb. cans.  
F. W. Morgan, Bridgeport, Ills.

Beeswax bought and sold. Strohmeyer & Arpe Co., 139 Franklin St., New York.

FOR SALE.—Michigan's best white extracted honey in packages as desired. Also comb honey.  
A. G. Woodman, Grand Rapids, Mich.

FOR SALE.—Clover honey in sixty-pound cans, 15c per pound; No. 1 white comb, \$4.50 per case of 24 sections; No. 2 white, \$3.50 per case, six cases to carrier.  
H. G. Quirin, Bellevue, Ohio.

FOR SALE.—Clover, heartsease, No. 1 white comb, \$3.50 per case; fancy, \$3.75; extra fancy, \$4.00; 24 Danz. sections to case, extracted, 120-lb. cases, 15 cts. per lb. W. A. Latshaw Co., Carlisle, Ind.

One or 100 barrels mild-flavored light-amber honey, just right for blending with Northern honeys. For sample and price F. O. B. New York, address Elton Warner's apiaries, San Juan, Porto Rico.

## HONEY AND WAX WANTED

WANTED.—Comb and extracted honey.  
J. E. Harris, Morristown, Tenn.

WANTED TO BUY beeswax. Highest prices paid.  
W. A. Latshaw Co., Clarion, Mich.

WANTED.—Honey, carload or less, state lowest price.  
O. N. Baldwin, Baxter Springs, Kan.

WANTED TO BUY a quantity of dark and amber honey for baking purposes.  
A. G. Woodman Co., Grand Rapids, Mich.

Chas. Israel Bros. Co., 486 Canal St., New York. Established 1878. Wholesale dealer in Honey and Beeswax. We buy Honey. Send us samples and the quantities you have, also your best price delivered New York. We pay the highest market price for clean, bright yellow beeswax.

WANTED.—Comb and extracted honey at jobbing prices. National Honey Producers' Association, Kansas City, Mo.

WANTED.—Extracted honey in both light and amber grades. Kindly send sample, tell how honey is put up, and quote lowest cash price delivered in Preston.  
M. V. Facey, Preston, Minn.

BEESWAX WANTED.—We are paying higher prices than usual for beeswax. Drop us a line and get our prices, either delivered at our station or your station as you choose. State how much you have and quality. Dadant & Sons, Hamilton, Illinois.

\$19.00 buys 100 comb-honey shipping-cases holding 24 4 x 4 x 1 3/8-in. plain sections, including 3-in. glass, nails, and corrugated paper. This price is f. o. b. our factory in Wisconsin, and includes \$1.00 for a subscription to the Domestic Beekeeper the balance of this and ALL of 1918. Address Service Department, Domestic Beekeeper, Northstar, Michigan. Can make prompt shipment.

## FOR SALE

FOR SALE.—A full line of Root's goods at Root's prices.  
A. I. Healy, Mayaguez, Porto Rico.

2000 FERRETS. Prices and book free.  
N. A. Knapp, Rochester, Ohio.

FOR SALE.—100 empty 60-lb. honey-cans, 30 cts. each.  
John Kneser, Hales Corners, Wis.

Beekeepers, let us send you our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap.  
White Mfg. Co., Paris, Tex.

FOR SALE CHEAP.—Several hundred factory-made hives; some new, some used two or three years. All 10-frame. Oscar Ritland, Elroy, Wis.

SEND TODAY for samples of latest Honey Labels for comb and extracted. Not only the most attractive, but also the lowest in price. Samples free. Liberty Pub. Co., Sta. D, Box 4-E, Cleveland, Ohio.

FOR SALE.—McKinley Music-selling Outfit; also Century stock and filing system, f. o. b. California. Good \$20 hand cider-press, f. o. b. Indiana. All half price.  
G. K. Hubbard, Riverside, Cal.

THE ROOT CANADIAN HOUSE.—73 Jarvis St., Toronto, Ont. (note new address). Full line of Root's famous goods; also made-in-Canada goods. Extractors and engines; GLEANINGS and all kinds of bee literature. Get the best. Catalog free.

\$21.00 buys 100 comb-honey shipping-cases holding 24 regular beeway sections each, including 2-in. glass, nails, and corrugated paper; also \$1.00 for a subscription to the Domestic Beekeeper the rest of this year and ALL of 1918. Address service Department, Domestic Beekeeper, Northstar, Michigan.

## GOATS

FOR SALE.—Nubian grade milk goats, does and kids. Tell me what kind you want.  
R. M. Collins, 630 S. 22d St., Muskogee, Okla.

## POULTRY

Roosters from Eglantine strain. A few roosters for sale, \$5.00. Descendants of the world's champion 314-egg hen. No show birds, but layers. A few orders booked for hatching eggs, \$3.00 per setting. Paul Marquardt, 829 Teutonia Ave., Milwaukee, Wis.

## WANTS AND EXCHANGES

WANTED.—Albino queens. Who has Albinos?  
D. E. Lhommedieu, Colo, Iowa.

BEESWAX WANTED.—For manufacture into Weed Process Foundation on shares.  
Superior Honey Co., Ogden, Utah.

WANTED.—One four-frame extractor, reversible, but not necessarily automatic; must be a bargain.  
Joseph S. Scott, Mt. Pleasant, Ala.

WANTED.—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5 cts. a pound for wax rendered. The Fred W. Muth Co., 204 Walnut St., Cincinnati, O.

OLD COMBS WANTED.—Our steam wax-presses will get every ounce of beeswax out of old combs, cappings, or slumgum. Send for our terms and our new 1917 catalog. We will buy your share of the wax for cash or will work it into foundation for you.  
Dadant & Sons, Hamilton, Illinois.

**WANTED.**—To buy for cash an apiary in the southern states, preferably in Florida. Emile, care of B. Auguste, 232 O. T. Johnson Building, Los Angeles, Cal.

\$20.00 buys 100 comb-honey shipping-cases holding 24 4¼ x 4¼ x 1½ plain sections, including 2-in. glass, nails, and corrugated paper. This price is f. o. b. our factory in Wisconsin, and includes \$1.00 for a subscription to the Domestic Beekeeper the balance of this year and ALL of 1918. Address Service Department, Domestic Beekeeper, Northstar, Michigan.

## REAL ESTATE

**FOR SALE.**—One twenty-acre farm with ginseng beds. Also 200 swarms of Italian bees and a quantity of fine honey put up in 60-pound cans at 15c a pound. L. Francisco, Dancy, Wis.

**FOR SALE.**—110 colonies of bees in new ten-frame dovetailed hives, frames wired, full sheets foundation used; metal-roof covers, with inner covers. Location goes with outfit. A 100-per-cent paying investment. Price and description on application, extracting outfit. Custer Battlefield Apiaries, Hardin, Mont.

**VIRGINIA AND NORTH CAROLINA FARMS** \$15 per acre and up. Easy payments. Fruit, dairy, stock, climate, schools, churches, roads, markets, and neighbors of the best. Get our farm lists, magazine, and other interesting literature, all free. Address F. H. LaBaume, Agr. Agt. N. & W. Ry., 246 N. & W. Bldg., Roanoke, Va.

A small California farm earns more money with less work. Raise the crops you know about—alfalfa, wheat, barley, etc.—also oranges, grapes, olives, and figs. Ideal for dairying, pigs, and chickens. No cold weather; rich soil; low prices; easy terms; good roads; schools and churches. Enjoy life here. New comers welcome. Write for our San Joaquin Valley, also Dairying and Poultry Raising illustrated folders, free. C. L. Seagraves, Ind. Com. A. T. & S. F. Ry., 1927 Railway Exchange, Chicago.

Do you want a farm where largest profits are made? The South's great variety of crops and wonderfully productive climate make it the most profitable farm section of America. It is the place for the lowest-cost meat production and dairy farming. It grows the largest variety of forage crops. Good lands, in good localities, as low as \$15 to \$25 an acre. Let us show you locations that will give the highest profits. M. V. Richards, Commissioner, Room 27, Southern Railway System, Washington, D. C.

## BEEES AND QUEENS

Finest Italian queens. Send for booklet and price list. Jay Smith, 1159 DeWolf St., Vincennes, Ind.

**PHELPS** queens will please you. Try them and you will be convinced. C. W. Phelps & Son.

Well-bred bees and queens. Hives and supplies. J. H. M. Cook, 84 Cortlandt St., New York.

**FOR SALE.**—Bees, queens, and honey in their season. H. G. Quirin, Bellevue, O.

"She-suits-me" bright Italian queens; \$1 by return mail till Oct. 1. Allen Latham, Norwichtown, Ct.

Three-banded Italian queens and a few hundred pounds of bees for sale. Safe arrival guaranteed. J. A. Jones, Rt. 3, Greenville, Ala.

Try **ALEXANDER'S** Italian queens for results. Untested, each, 75 cts.; 6 for \$4.25; \$8 per dozen. Bees by the pound. C. F. Alexander, Campbell, Cal.

When it's **GOLDENS** it's **PHELPS**. Try one and be convinced.

C. W. Phelps & Son, Binghamton, N. Y.

**FOR SALE.**—Twenty colonies of Italian bees. For particulars address W. R. Houghtaling, Box 25, Sharon, Conn.

Tested leather-colored queens, \$2.00; after June 1, \$1.50; untested, \$1.00; \$10.00 per dozen, return mail. A. W. Yates, 3 Chapman St., Hartford, Conn.

Vigorous prolific Italian queens, \$1; 6, \$5, June 1. My circular gives best methods of introducing. A. V. Small, 2302 Agency Road, St. Joseph, Mo.

Italian queens, **THE HONEY GATHERERS**. Price one dollar each, nine dollars a dozen. Edith M. Phelps, 259 Robinson St., Binghamton, N. Y.

Southwest Virginia five-band Italian queens, the fancy comb-honey strain, gentle to handle. They will please you. Try one, \$1.00 each. Henry S. Bohon, Rt. 3, Box 2112, Roanoke, Va.

Golden Italian queens, good as the best, to close out quick. Price, select tested, \$1.00; tested, 75 cts.; untested, 50 cts.; no discount of any kind. D. T. Gaster, Rt. 2, Randleman, N. C.

My bright Italian queens will be ready to ship April 1 at 75 cts. each; virgin queens, 35 cts. Send for price list of queens, bees by the pound and nucleus. Safe arrival and satisfaction guaranteed. M. Bates, Rt. 4, Greenville, Ala.

Golden Italian queens from June to November, untested, 75 cts.; 6, \$4.25; doz., \$8.00; tested, \$1.25; 6, \$7.00; select tested, \$1.50; breeders, \$5.00. Bees by pound or nucleus. Pure mating guaranteed. Send for circular. J. I. Danielson, Fairfield, Ia.

The demand for **PHELPS' GOLDENS** has been so great that we shall not be able to fill orders for less than \$12.00 a dozen for the remainder of the season. Single queens \$1.00 as usual. **THEY ARE BEAUTIES!** Try one. C. W. Phelps & Son.

**NOTICE.**—I am now uniting nuclei for winter, and have some fine young queens on hand for prompt shipment at 75 cts. each or 12 for \$7.00. Bees from this strain of Italians have this poor honey season stored 150 lbs. honey per colony.

J. B. Holoepeter, Queen-breeder, Rockton, Pa.

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## PATENTS

Practice in Patent Office and Courts  
Patent Counsel of The A. I. Root Co.

Chas. J. Williamson, McLachlan Building  
WASHINGTON, D. C.



## Our Food Page.—Continued from page 857

do not care for the lettuce, substitute celery, or the salad could be omitted.

The crust to the pumpkin pie could be omitted; but if you wish a crust, try one made of part whole-wheat flour. We think it is quite as good. Also if you take pains to have all your ingredients very cold, and use as little water as possible, you can make a tender, flaky pie crust with very little shortening, thus saving fat and benefiting your digestion. Pumpkin pie really needs a bit of cheese; but make it very small, for the dinner has enough food value without it. The nuts are also unnecessary, but put in a few for the kiddies.

## MARYLAND CHICKEN.

Divide the chicken in pieces for serving; roll in flour, and season lightly with salt and pepper. Put in covered roaster; dot with bits of chicken fat; pour in cold water until you can see it; cover and bake very slowly until tender, which will be several hours if it is an old fowl. This is an ideal way for cooking a rather old fowl, as it will cook tender more quickly than if stewed, and will taste much like fried chicken. Use what flour is left from flouring the chicken for thickening the gravy in the pan.

## PUMPKIN PIE DE LUXE.

½ cup sugar	1 teaspoon flour
2 eggs	1 teaspoon ginger
1 tablespoon honey	½ teaspoon cinnamon
1 teaspoon salt	1½ cups milk

Mix the flour, salt, and spices with the sugar; beat in the eggs lightly; add the honey and then the milk. Stir until smooth and pour into a plate lined with whole-wheat pastry. One of the eggs may be omitted. Substituting cream for a part of the milk is a great improvement.

## HONEY BRAN DROPS.

½ cup shortening	About 2 cups flour
2/3 cup honey	2/3 teaspoon soda
1 egg	½ teaspoon salt
2/3 cup sour milk	1 teaspoon baking powder
2 cups bran	1 cup raisins

Blend the shortening with the honey slightly warmed; beat in the egg; add the sour milk, the bran and the flour in which the soda, salt, and baking powder have been sifted. Use enough flour to make a drop batter. Add the raisins last. Bake on a well-oiled cookie sheet, leaving plenty of room for them to spread.

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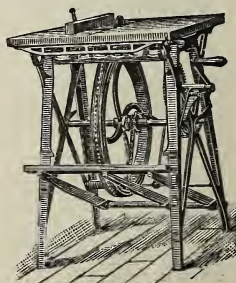
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## AROUND THE OFFICE

M.-A.-O.

Dear Reader:—This is going to be a solemn occasion. It's about skunks—skunks and bees, skunks and men—and I'm not for fooling much about skunks. I've been there myself. So I know skunks ain't to be made light of—not if you get enough and a little more. This ain't my fight, either, and perhaps it's none of my business. But Mel Pritchard, our queen and bee rearer, has been stomach aching around the office about half the summer telling what the skunks have been doing to his apiaries—and also a little to him. He has had three apiaries this season. Two of these have been skunky, and one has been free from skunks. One of the skunky apiaries, nine miles from his home, 30 colonies, was all o. k. and strong in early spring. But later skunks had their own way, for Mel was too far away to take a hand. From this colony he didn't take a pound of honey nor a pound of bees, and the colonies are left weak to go into winter quarters. His home yard was skunkered, but there Mel captured a half dozen of the varmints by his odorless method (to be explained later in this treatise), and then succeeded in getting only 12 pounds of bees for sale out of this home yard and no honey—the skunks doing a lot of damage despite the owner's best efforts. A third apiary, located 10 miles from our queen-breeder's home, had no skunk troubles, and yielded 206 lbs. of bees for sale uses, and is in fine condition this fall. So Mel says he can't really recommend skunks for the apiary. But he's been studying them hard this summer, using a flash light in making his nocturnal investigations. He says they begin troubling more or less in the spring, but are worst in the hot weather of midsummer, when the bees cluster on the outside of the hives and the young skunks have got big enough to enjoy a bee lunch. The same individual skunks have come to Mel's home yard night after night, and seemed to feed on bees till they were filled full up, keeping at it three or four hours at a lick. If the bees are clustered outside, the skunk ever so carefully grabs his tidbit, one at a time, with his mouth, throws the bee on the ground, rolls it over and over with his paws (probably till its stinger is out of commission), and then eats it. He gets away with about three a minute. If the bees are all inside the hive when the skunk arrives for supper, he proceeds to scratch and claw the outside of the hive till the bees begin rushing out, when he puts into operation the same catching and eating process as when he finds them clustered outside. Mel says he has half a notion that the skunk seizes the bees by their wings with his mouth—the skunk does this very carefully, at least. The bees seem never to attack a skunk—perhaps they are afraid of his stinger. Mel has curiously

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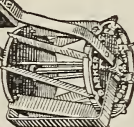
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## Around the Office—Continued

noticed that, when his skunkship is lunching off a hive of bees, some bees will crawl out into the grass and sound the same peculiar wail as do bees in the South when attacked by red ants. He has seen a skunk take note of this wailing sound, follow it till he finds the bee, and then proceed to eat it. As a final observation, our queen-rearer says that perhaps the worst work of skunks in an apiary is not the amount of bees destroyed but the general demoralization that the skunks seem to work in the hive. They put the bees to the bad, and completely uncondition them. Finally, Mel recommends a poultry fence, perhaps two feet high, well grounded, placed entirely around the apiary, to beat the skunks. Now, that's talking more sense at one time than I am used to. I have got to quit it right off. But I thought you would forgive me for giving you a little of Mel Pritchard's natural-history observations. For that sad-faced, serious, bucolicky philosopher is some nature observer I want to tell you. Oh, yes! about that odorless method of capture of his. I almost forgot that. It's a regular humdinger—when it works. When it don't work, it's a binger on the fellow trying to work it, also a lasting regret and great disappointment (to the odorless operator, understand, not to the skunk). But I am going to take Mel's part in this discussion and defend his system—if he'll promise not to come over here to the office and hang around for at least a full month after the next time it fails again. You see, Mel has been modestly qualifying around these parts for some years past as a sort of skunk expert. He doesn't advertise to eat 'em alive, eat 'em alive while-you-watch; but he does give it out rather confidentially to almost everybody in this part of North America that he can juggle with a skunk of average even



Mel demonstrating just how to do it—and hoping the durndest nothing will happen.

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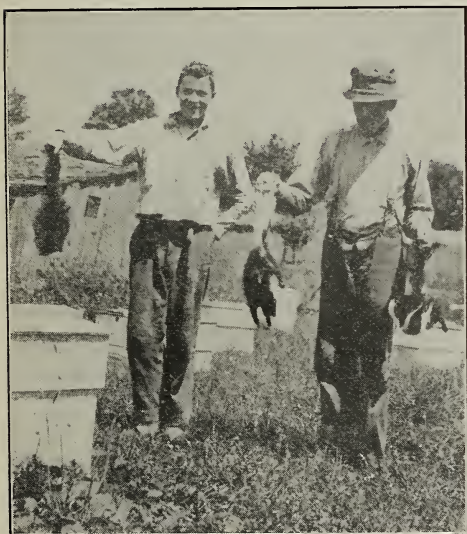
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where the good beehives come from.

### Around the Office—Continued



His son and Mel prove that skunks can be handled and the man-handlers live thru it, too.

temper, capture him barehanded, and not have to sleep in the barn for a week afterward, either. Mel doesn't seem able to tell just how he does this. Ask him, and he'll tell you experience is a mighty great teacher. His exact words are: "Some experience is necessary to know just when to grab a skunk by the tail, but a plaguey sight more is necessary to know when NOT to." There doesn't seem to be any snake-charming business about it. He says you mustn't irritate the skunk unduly. Approach him leisurely and pleasantly, allaying any suspicions of hostility that may get started in the skunk's mental processes. Trot along beside him for awhile in a playful manner—

but always stop when he does, and take immediate observations as to whether his tail is over elevated a little and whether he is contemporaneously and earnestly aiming at you over his right fore shoulder. If he is, go away immediately and for quite a little while. Don't go up at such a time and harshly tread on him continuously nor try to rub his ears together. It won't work—that is, the way you would have it work, for the skunk is likely not to like it. So wait in a perfectly friendly manner just out of range till the storm signals are lowered, and then when he has started along again resume your position at his side (do this rather nonchalantly and indifferently). Now trot along beside him as before until such time as you feel you have won his entire confidence. About this time also win a sure and very sudden hold on his tail; hoist quickly with a deft upward upheaval of the arm and body—and there you have him amid air, possibly a little surprised but not resenting it so much as you might think. That, in brief, is Mel's system in this very hair-trigger business. But there is one accompanying theory of this system of Mel's, namely, that a skunk can't transact business with all his feet clear of the ground, that Mel says ain't so. He learned it wasn't so by finding it out. It was some years ago. A neighbor of his had got or found a skunk in a sort of big pot-hole in the ground from which it couldn't get out. He at once became avaricious for skunk fur, disregarding of any rights the skunk might have in the matter, and was wondering how he could get the skunk out of the pot-hole and reduce him to good skinning condition without being too heavily penalized in the process. It was just then that Mel (bearing even in those far years a local reputation as a skunkologist and odorless operator) came along. His neighbor put the whole case up to him—aspirations for acquisition of skunk fur without too much skunk, misgivings in



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A two-frame nucleus and untested queen of this strain shipped on the tenth of May, 1916, built up into a ten-frame colony and stored FOUR SUPERS OF COMB HONEY and the owner says he believed they would have filled another super had he known enough to have given it to them.

In buying queens to fight EUROPEAN FOUL BROOD remember how little it affected DR. MILLER with this same strain.

## The Stover Apiaries, Mayhew, Mississippi

### Around the Office—Continued

undertaking the enterprise, etc. Mel, right off the bat, assured the good neighbor it was almost as easy as rolling off the proverbial log, and proceeded at once and successfully to take a cord out of his pocket, tie a slip noose in it, rig it to the fork of a stick, slip it over the skunk's tail (soothingly), tighten the slip knot, and hoist that skunk out of the pothole and suspend him from a limb of a nearby tree, where he dangled with his feet on nothing—no atmospheric disturbance, either—slick as a greased pig's ear. "There, neighbor," said Mel, "you can kill that skunk with a club now, skin him, and go right from here to church. You see he can't get his feet on anything." The neighbor never faltered. One whack over the skunk's head set him to whirling around and around—also a fine, greenish, bluish, purple mist. A more perfect revolving, self-acting sprayer has never been devised. The neighbor was trustingly well within the zone of action. Mel says he (Mel) wasn't. His wife says he was. Everybody concerned testifies that in about one-third second there was a good deal of greenish, bluish, purplish something in the air besides mist of fore-said colors. Mel admits this was largely directed at him, and was mostly made up of sound. He also says he couldn't get up any explanation good enough to be accepted wholly or even in part. The neighbor seemed real provoked about something, and rude, and also persistently talkative. Mel says he can't now recall the entire conversation down there in the woodlot, but knows more of it was directed to him than to the skunk, and mostly sounded like "You know a h— of a lot about skunks, you do," etc., and so on. Mel says he remembers he

came away about that time. His wife says that why she thinks Mel was within range as well as the neighbor was that she got on to his coming home before he got in sight from back of the barn. Any way, Mel says that ever since that time he has held as entire bosh the theory that a skunk with his four feet off the ground and in mid air can't hang out the sign, "Business as usual." Nine times out of ten he won't, but the tenth time he may.

\*\*\*

If I were certain of ever returning to this momentous question at some future time for a really exhaustive discussion of it, I wouldn't now add that Mel not so long ago offered some expert advice and dissertation to Mr. Kellogg, the man in charge of the A. I. Root Co.'s ledger department, as to how to remove one mother skunk and her young ones from said Kellogg's cellar where they had clandestinely domiciled. Mel completely gained our expert bookkeeper's confidence, in some way or other, who tried it on. Mel says he failed to follow directions, or used bad judgment at a critical moment. Kellogg says he didn't. Kellogg also is known to have said something to Mel, who was present taking expert observations and standing just outside Kellogg's bathroom window. Kellogg's very recently worn suit, underclothes, stockings, etc., came out of the bathroom window first, and then this: "Mel, you may know something about rearing queens, but what you don't know about handling skunks would fill the Middle West."

\*\*\*

Here's another use for honey—sent me by Stacey Puerden. I am going to give it in her exact words. It is just as plain as

## Around the Office—Continued

the nose on your face tho, that she invites some real "language" in mentioning it. But she wants M.-A.-O. to do it — like letting George do it. But I won't. I won't use good cuss words for anybody but myself, so I won't. I am not the public cusser. So here is just what Stancy Puerden wrote me: "Dear M. A. O.:—While I was peacefully sitting at my typewriter working at my November copy I heard the managing editor out in the street. You know his voice carries some, so I had no difficulty hearing what he said. He was putting Mr. Puerden wise to a new wrinkle in shaving. What was my horror to hear him say he dipped his shaving brush in honey to make a lather that won't dry so quickly as a pure soap lather does. Just think of wasting a valuable food like honey on the outside of his face, and at a time when it is so hard to get enough honey to fill our orders, too. It made me especially indignant because I am coming out with a honey story in this issue. I thought of telling of it in my page, but am afraid I could not get it by the editor, for he seems to read my page before it is published, and I have imagined he does not read yours—at least not very thoroly. If you care to mention the matter you may, and you have my permission to say anything you like about my indignation at the sinful waste of food material in war time. The neighbors know my feelings so well that they hide their frosted cakes when they see me coming. If Hoover objects to frosted cakes what would he say to frosting men's faces with honey lather?"

\* \* \*

In reading an old volume of Gleanings the other day I found one on "Uncle Amos" that made me snicker, so I pass it along. It was in the volume of 1888. "Uncle Amos" was trying to give dear old "Rambler" (you older readers all remember him) some friendly suggestions as to quitting his bachelor life, and the printers got it in this way: "Now I wonder if it never occurred to your bachelor friends that even a weed in the garden of Eden itself would not have amounted to very much without the companionship of womankind." In the next issue, 50 pages later, "Uncle Amos" made a plaintive apology, saying that what he intended to state was, "Even the Garden of Eden itself would not have amounted to very much without the companionship of womankind."

\* \* \*

Albert J. Wright, attorney and counselor-at-law at Bradford, N. Y., in sending a year's subscription for Gleanings, adds: "I am in bed sick with sciatica, and must have something to read, and Gleanings fills the bill." What in Samhill does he mean? Has Gleanings come to be a counter-irritant for sciatica? I'll bet a man with sciatica likes some of the real sort of language in "Around the Office" that in the good old

past has been found there, and which the Roots and a lot of other misguided good people are trying to choke me off from—durn it all!

\* \* \*

Thanks, Mr. Reeder of Fisher's Ferry, Pa. Your appeal to the Editors has strengthened a little my very slight hold on "Around the Office" job. I have used mighty few cuss words this month, too, you notice. I calculate that will moderate "Uncle Amos's" disposition toward me some. But it's strangling the liberty of the press, all the same, and I am almost suffocating for want of free and full expression of my most important views.

\* \* \*

An inquirer out at Bison, Kansas, asks Gleanings if wild bees will accept tame beeswax, or if tame bees will accept wild beeswax. Now, who knows how to tame wax? Dr. Miller? (By the way, Dr. Miller, I haven't told you that I like you along with J. E. Crane—but I do.)

## BOOKS AND BULLETINS

"FORTY-TWO YEARS BEEKEEPING IN NEW ZEALAND"—1874-1916—

Reminiscences by I. Hopkins.

The title above well suggests the scope of the little monograph from far-away New Zealand. It is not a manual for the apiary, nor a handbook for the beeman of that island nor any other island. Mr. Hopkins, the author, an Englishman of nearly half a century's experience in apiculture in New Zealand, recorded the growth and development of beekeeping in a series of articles that were published in "The New Zealand Farmer" for 1915. For the sake of his oldest friends in apiculture, Mr. Hopkins has had a few copies reprinted, and bound in neat blue cloth binding. The little volume has only the modest number of thirty-eight pages. But within the brief compass of his work Mr. Hopkins has painted a vivid picture.

Even Australia seems out of the world to the average American; but one must sail 1500 miles further east by south from Melbourne, Australia, to reach New Zealand, a dual island, rudely boot-shaped, a British colony situated in the southern hemisphere, 40 degrees south of the equator, between 170 and 180 degrees east of Greenwich; in short, it is on almost the exactly opposite side of our old earth from Greenwich (180 degrees would be just opposite), and is as far south of the equator as Korea and Japan are north. It has, roundly speaking, 103,000 square miles—almost identical in size with Colorado. It is situated in an almost isleless sea, without neighbors for 1500 miles in every direction. It is nearer to our California than to any other part of the United States.

The subjects in the book are treated in



paragraphs, each paragraph arranged under appropriate headings. A few of the headlines will serve to show the order of treatment, which is chronological. For instance, the first topic is "The Importation of the Hive-bee into New Zealand;" then "Primitive Beekeeping;" "The Honey Market in Those Days;" "Beekeeping in Other Countries;" "The First Stage of Progress in New Zealand;" "The First Movable-frame hive in New Zealand;" "The First Honey Raised Under the New System," etc. In fact, a list of all the headlines would give a fairly good idea of the entire work.

There were no honey-bees (*Apis mellifica*) in New Zealand previous to 1838. Only two species of native bees existed, neither of them being of any use as honey-gatherers. The first honeybees came from England, March 13, 1839.

The methods used in the first apiaries were primitive, following the crude methods of the cottagers of England. The hives were common boxes with cross-sticks to support the combs—a form of hive common in the United States a half a century ago. Straw skeps were also used. Sulphuring the bees in pits was the common way to take off honey.

Read what the author says on page 5 under the title "The Honey Market in Those Days."

For some years after I came to New Zealand, 51 years ago [he is writing from Auckland, New Zealand, March, 1916], the only honey I saw for sale was what the Maoris (the Maori was the native New Zealander) hawked about in old kerosene-cans or some other old tins—a conglomeration of honey, wax, and bee-grubs. The latter was considered a delicacy by the older Maoris. All was mixed together, and was usually obtained from bee-nests in the "Bush," plentiful in those days. Occasionally strained honey, free from wax, etc., would be offered; but as it was generally believed, with good reason, that the straining cloths used by the Maoris were parts of discarded blankets that had served as body-wrappers in the hey-day of their usefulness, the vendors found very few customers.

Early in 1874 Mr. Hopkins became deeply interested in practical beekeeping. No one previous to that time in all New Zealand knew anything about the progress of apiculture or modern methods in other countries. The flora of New Zealand was wonderful, and bee-farming impressed the author as a great possibility if modern methods could be employed.

Now note the role that the United States played in New Zealand apicultural developments. In 1878 Mr. Hopkins learned from an English journal something of the doings and writings of A. I. Root in this country. He wrote to Mr. Root at once and received in reply a copy of *Gleanings* and a price list of fixtures. At the same time he obtained from London a copy of "Langstroth on the Hive and Honeybee." He then ordered from Mr. Root a comb-foundation machine, a honey-extractor, a smoker, and some other appliances, in the meantime making several L. hives from the instructions he had re-

ceived. The comb-foundation machine was the second one to leave the United States—the first one going to North Scotland. It cost Mr. Hopkins \$70 in New Zealand. The honey secured by Mr. Hopkins under the new methods was from the Bush, and was too thick to extract; and so he produced for a time only comb honey in one-pound sections—which, by the way, were in four pieces and had to be nailed together with great labor.

In 1880 Mr. Hopkins began writing on beekeeping topics for the "Thames Advertiser" and the "Auckland Weekly News." His writings led him into a supply business. Then came the introduction of the Italian bee in 1879 by Mr. Harrison, of Coromandel, New Zealand, and Mr. Hopkins, the former gentleman receiving his bees first, altho Mr. Hopkins had ordered his first. They came from Mr. R. Wilkin, of San Buenaventura, California. Mr. Hopkins had ordered his Italian bees from Mr. Root, and was told that California was nearer to New Zealand than New York, and was advised to order from California accordingly.

The growth of modern beekeeping in New Zealand was wonderful. While few inventions were made there, the beemen utilized the best that was then known in the United States and England, and thus all developments were along scientific lines. It is interesting to note that the progress of beekeeping methods of New Zealand kept very nearly apace with the industry in America and other English-speaking countries.

In 1882 the first queen-rearing was started, and that same year official permission was obtained to send queens thru the mails. In 1883 out-apiaries were begun. In 1883 Mr. Hopkins began "The New Zealand and Australian Bee Journal." In 1884 occurred the first general bee and honey show in New Zealand, and at a special meeting called during this exhibition was formed the first National New Zealand Beekeepers' Association. This new association adopted the ten-frame Langstroth hive as a national standard. Early in 1880 foul brood had appeared in New Zealand, and for 20 or more years the beemen of the country had a hard fight with the disease. The box-hive man was the great menace and obstacle to the conquest of the pest, there as elsewhere. On April 28, 1888, the government of New Zealand passed a foul-brood and disease-in-bees prevention act. As a result, tho the disease still lingers in places, it is in a fair way to be suppressed altogether, as the author says on page 35.

In the introduction the author makes a boast that seems a little sweeping. He says: "I have no hesitation in saying that we lead the world in beekeeping. I am aware it is a big claim; but when we consider that no country has such an effective apiaries' act for controlling diseases, and such compulsory regulations for government trading of all honey leaving the country, annual registrations of apiaries and supervision of all imported bees, besides permanent inspectors of

apiaries, I do not believe it will be thought an idle boast."

Undoubtedly there is a bright future for New Zealand beekeeping. There were in 1915 11,200 beekeepers on the island, owning 74,340 colonies, whose annual output was valued at \$250,000.

Following so closely as it does on the heels of Tarlton-Raymont's recent work, "Money in Bees in Australia," this little monograph of Mr. Hopkins on beekeeping on another island in the great oceanic group is of special interest and worth. Our own Dr. Phillips has already made beemen familiar with Hawaiian beekeeping. With Australian and New Zealand apiculture vividly portrayed within the past two years, we are almost around the world in our beekeeping data. The East is almost reaching the West. Only the Fiji Islands and a few neighboring groups yet remain. Beemen will soon "join hands across the sea," and perhaps yet realize what Kipling called impossible in his beautiful ballad:

Oh! the East is the East  
And the West is the West,  
And never the twain shall meet  
Till the earth and the sky stand presently  
At God's great judgment seat.  
But there is neither East nor West,  
Border nor breed nor birth  
When two strong men stand face to face  
Tho they came from the ends of the earth.

[It would not be fair to close this review without stating that Mr. Hopkins sent this booklet with his sincere regards to our pioneer in apiculture, A. I. Root, written with his own hand.—Ed.]

## Special Notices by A. I. Root

Off for Florida, (after Ohio is voted dry, God helping us) on Nov. 6th.

### SWEET CORN—ALL ABOUT IT.

I hold in my hand a very pretty book of over 200 pages (and a whole lot of nice pictures), and it is all about sweet corn. You might wonder, before looking the book thru, how there could be enough to say just about sweet corn, and no other kind, to make a good-sized book. Sweet corn was first found among the American Indians, we are told; and this has been improved, and new varieties worked out, as you may be aware by looking over the seed catalogs, until it has got to be quite an industry, especially in supplying the early markets. I was particularly interested in the chapter on transplanting sweet corn; and only last May, when we got back here to Ohio from Florida, I made some tests of seed with both sweet and field corn. Of course, this was done indoors; but after my tests the plants were growing so thriftily, and looked so handsome, I transplanted about a dozen hills out in the garden when it was about time to plant outdoors. These few hills gave nice corn fully two weeks ahead of the others.

Now, where you can get a good price for the first sweet corn that appears on the market, it will, no doubt, pay to start the little corn-plants indoors. Of course, this book discusses all about canning and drying sweet corn. The price of it is only 75 cents postpaid. You can address the O. Judd Co., New York, or you can order it of us if you prefer to do so.

### GREENHOUSES; THEIR CONSTRUCTION AND EQUIPMENT.

The above is the title of a beautiful book of 269 pages, just put out by the O. Judd Co. It contains 131 illustrations, many of them beautiful photo-

graphs. As our older readers may be aware, greenhouses and gardening under glass has been a hobby of mine more or less for sixty years; and I am greatly pleased to get hold of a volume so ably written, and clear up to date as this one, which has just been put out in the year 1917. I think it will pay any one who has anything to do with greenhouses, hotbeds, or coldframes, to get this splendid book. It is by W. J. Wright, Director of the New York State School of Agriculture. Down in Florida, especially in the southern part where our home is, most people seem to think there is no need of sashes, especially glass-covered frames; but in my experiments last winter in forcing potatoes I found three or four sashes to be of great value. The use of cloth-covered beds for celery, tomatoes, and other plants, is, of course, quite common down there. The above book covers so thoroughly and intelligently the different opinions in regard to the construction and management of everything pertaining to "gardening under glass" that I deem it of great value. The price is \$1.60 postpaid by mail. Address the O. Judd Co., New York. You may order it of us if you prefer to do so.

### ALFALFA FOR GREENS; SOMETHING ABOUT ANOTHER GOOD FRIEND AWAY OFF IN CALIFORNIA.

SEE PAGE 397.

*Friend Root*:—I read what you said in regard to alfalfa used as greens, and, tho I stripped the leaves and we used the very tenderest tips, it was "no go."

Recently, with three members of my family I paid a visit to our mutual friend W. A. Pryal, of Oakland. We had a most delightful visit with him and his estimable family over a week, and visited all points of interest in Oakland and vicinity, and had some good talks of old times and the old beekeepers of long ago. Friend Pryal is a well-posted man in regard to all things apicultural, and it is very interesting to talk with him. We took a journey over the mountains in our Ford of over 1500 miles, and saw the big trees and other wonders of this wonderful state. We had no trouble or expense with our car during the long journey, and we had some steep climbing up the mountains.

Enclosed find renewal to GLEANINGS. I don't know how many more renewals I shall make. It all depends on how long you and I live. So long as you are alive I want GLEANINGS.

Hoping you may be spared many years yet to cast your influence on the side of all that is good and right, I remain Your old friend,

E. T. FLANAGAN.

San Gabriel, Cal., Aug. 10.

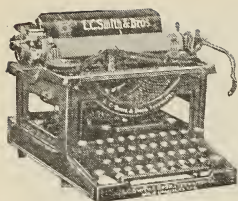
My good friend, our experiments were made with alfalfa when it was just starting in the spring; and I think if you cut the tender shoots when they are just a few inches above the ground you will find they will make splendid food. I hope, my long-time friend, that you may be spared to make many more renewals; and we can all say, as our good friend Dr. Miller did a while ago, we are going to try to live just as long as we possibly can.

### A MATTER OF "LIFE AND DEATH."

We clip the following from the *Journal of Electricity* (California). It may save your life if you will read it carefully:

Between the rails of a railroad there are, ordinarily, just four feet eight inches and a half, and the rest of the unsafe space does not exceed three feet; yet with all the rest of the world to stand and walk on, some 11,000 people every year find it necessary to their employment to end their days or their health on this narrow strip of land.





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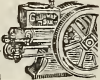
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